THE K'AXOB FORMATIVE CERAMICS:

THE SEARCH FOR REGIONAL INTEGRATION THROUGH A REAPPRAISAL OF CERAMIC ANALYSIS AND CLASSIFICATION IN NORTHERN BELIZE.

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CONTAINS PULLOUTS

ABSTRACT

The formative village of K'axob is located on a low rise in the lowland swamp and riverine setting of northern Belize. In 1992, I initiated a type-variety analysis of Formative period ceramics from the northern Belize site of K'axob. Following the lead of Andrews V (1990), I closely scrutinize the criteria used for the classification of Formative ceramics from northern Belize, especially for the establishment of new types and varieties. The following study, therefore, embodies an attempt to review ceramic analysis in northern Belize. Along with the review, I discuss the debate surrounding the chronological place of Formative remains from northern Belize, including the implications of the Cuello shortened chronology to ceramic classification, and examine the possibility of tracing the origins of Swasey ceramics from Cuello. I describe the ceramics of K'axob, consequently, detailing the chronological sequence of Pulltrouser Swamp, and place the K'axob ceramics within the general cultural background of the Maya Lowlands. Through such rigorous study, the K'axob ceramic evidence yielded information on the life of a small Formative village in northern Belize, as well as the contacts with sites in the Guatemala Highlands, Honduras, and El Salvador, during Formative times.

E R R A T U M

Where referred to in the text, the pottery type "Society Hall: Society Hall variety" should be read as "**Society Hall Red: Society Hall variety**"; and "Sierra Red: Sierra Red variety" should be read as "**Sierra Red: Sierra variety**".

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Chapter I: The Introduction

THE DEFINITION OF THE K'AXOB CERAMIC PROJECT

In 1992, I initiated the analysis of Formative period ceramics from the northern Belize site of K'axob (Figure 1.1). The type:variety analysis, hereby presented, includes a comprehensive discussion of the theoretical problems that I encountered in the process of classifying ceramics from K'axob. The following study, therefore, embodies an attempt to review ceramic analysis in northern Belize. Following the lead of Andrews V (1990), I closely scrutinize the criteria used for the classification of Formative ceramics from northern Belize, especially for the establishment of new types and varieties. Throughout this work, I specifically discuss the debate surrounding the chronological place of Formative remains from northern Belize, including the implications of the Cuello shortened chronology to ceramic classification, and examine the possibility of tracing the origins of Swasey ceramics. Implicit in the title of the following investigation is my hope that the Formative ceramics of northern Belize will be reinterpreted with the rest of the Maya Lowlands and that the type:variety system classification scheme will be strengthened rather than compromised. Through such rigorous study, the K'axob type:variety ceramic analysis expects to provide information on the life of a small Formative village in northern Belize.

I.- BACKGROUND TO K'AXOB

Archaeological research in northern Belize provides a considerable amount of comparative material. For its time, the Pulltrouser Swamp Project offered to Mesoamerican archaeology with one of the most extensive studies of raised field agriculture (Turner and Harrison 1983; Ettlinger 1983; Harrison 1983; McAnany 1995). Research at the sites of Cuello (Hammond 1991a),

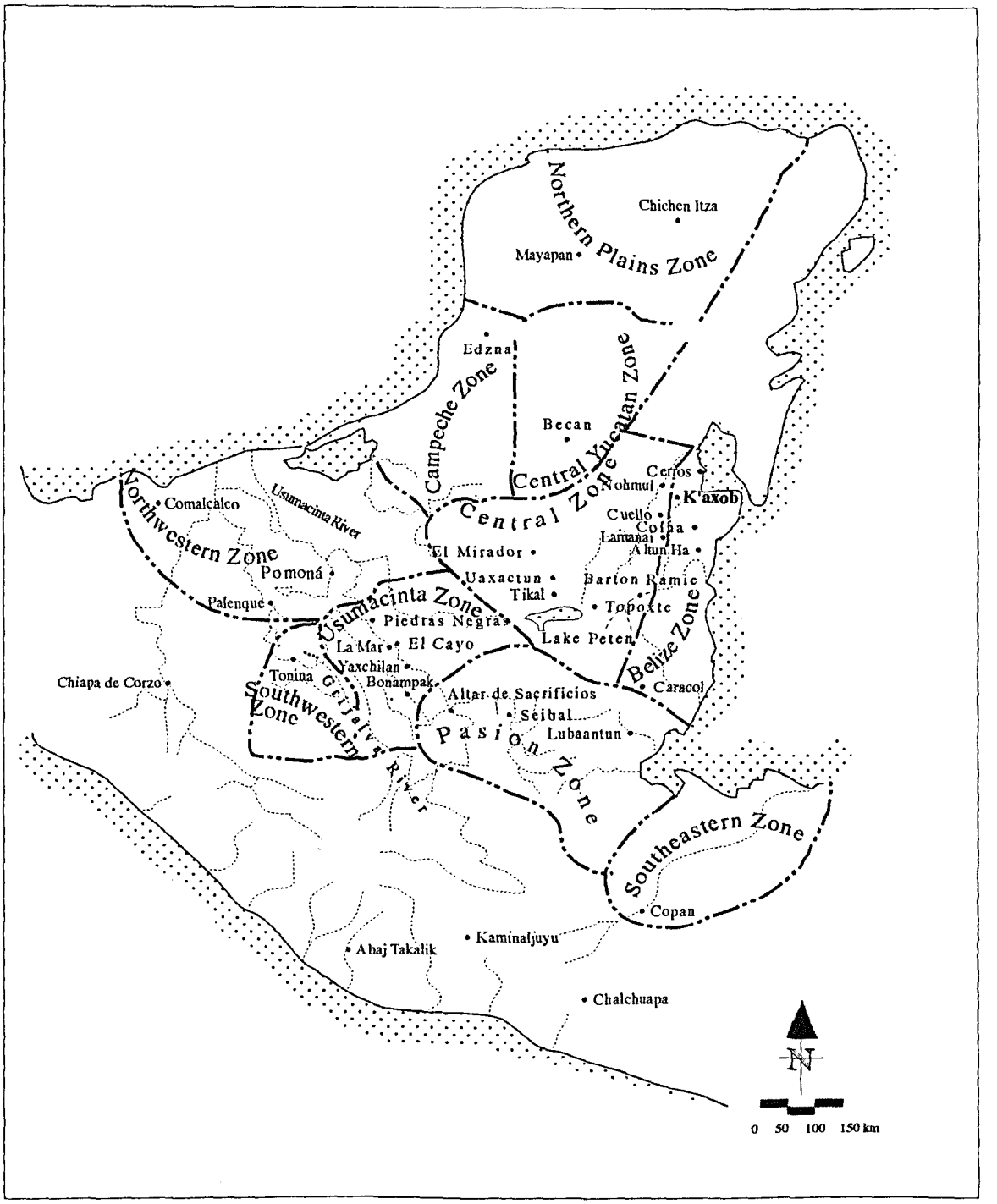

Figure 1.1 K'axob in the Maya Lowlands (After Adams and Culbert 1977).

Colha (Hester, Shafer and Eaton 1982), Cerros (Robertson and Freidel 1986) and Pulltrouser Swamp (Turner and Harrison 1983) yields information on the life of Formative Maya. Deriving from these studies, ceramic analysis supports the chronological place of archaeological findings. Researchers in northern Belize follow the type:variety system to study ceramic collections from Pulltrouser Swamp (Fry 1983), Colha (Valdez 1987), Cuello (Pring 1977a; Kosakowsky 1987a), Kichpanha (Reese and Valdez 1987), and Cerros (Robertson 1986).

Even though this can be a fruitful time in the archaeological study of northern Belize, the archaeological findings raise many questions for cultural interpretation. Essentially, the chronological place of Formative remains is still one of the most debated issues in Maya archaeology (Coe 1980; Marcus 1983, 1984; Kosakowsky 1987a; Andrews V 1990; Andrews V and Hammond 1990; Kosakowsky and Pring 1991; Hammond 1991a, 1991b). The debate over the Formative chronology commenced when Pring (1977a) reported finding Early Formative ceramics in Platform 34 at the site of Cuello. Early Formative ceramics from Cuello, called Swasey, dated between ca. 2600-1200 cal B.C. (Andrews V and Hammond 1990:570). The early date for the Swasey Ceramic Complex revised significantly our previous understanding of Early Formative ceramics. Such finding placed the Swasey Ceramic Complex before the full Olmec Horizon, dated between 1250-1000 B.C. (Willey 1978:535).

A. The K'axob Project Research

Considering the setting of ceramic research, Patricia McAnany decided to excavate the site of K'axob. K'axob is located on a low rise in the lowland swamp and riverine setting of northern Belize, between the southern arm of Pulltrouser Swamp and the New River (Figure 1.2). In 1981, the site of K'axob was surveyed as part of the NSF-supported Pulltrouser Swamp Project under the co-direction of Peter D. Harrison and B. L. Turner II (McAnany 1995). Results of the 1981 settlement testing program (a combination of a 12% random sample plus selective sampling) and further excavation field seasons (1990, 1992, 1993) at K'axob alone indicate that the occupational history of this area extended from the Middle Formative to the Postclassic (McAnany 1995).

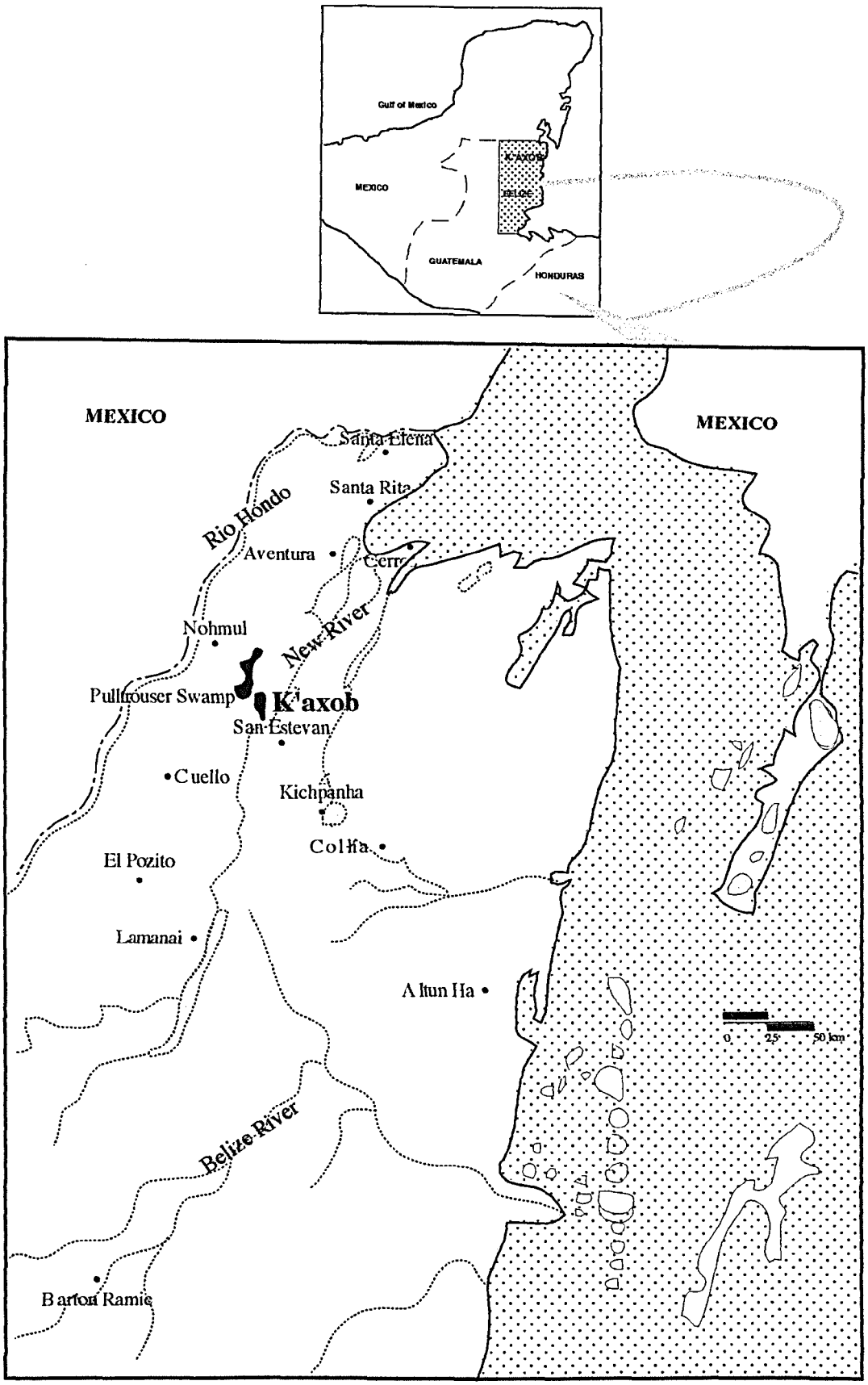

Figure 1.2 K'axob in northern Belize

The settlement of K'axob encompasses an area of about 84 hectares, is oval-shaped, and measures 1,400 m north-south and 600 m along an east-west axis. In this area, there are 90 low platforms, arranged around central open spaces, that lack free-standing architecture (McAnany 1995). The site of K'axob structures around two focal plaza complexes, Group A and Group B. A thirteen-meter tall pyramid, constructed during the Late Classic, dominates the northern plaza or Group A (McAnany 1993). Just over 300 meters to the South is the second plaza (Group B), composed of four pyramidal structures and two platforms (McAnany 1993). Within the basal platform of the southern group is the Formative village of K'axob.

The environmental zone of K'axob includes a wide variety of resources. The Pulltrouser Swamp area provided the inhabitants of K'axob with significant floral and fauna resources (McAnany 1995). From the Middle Formative to the Postclassic, the Pulltrouser Swamp area was reclaimed for agricultural use (see Turner and Harrison 1983; Ettlinger 1983; Harrison 1983; McAnany 1995). Archaeological evidence for northern Belize supports also the participation of small agricultural communities in a temporally stable, local exchange network (McAnany 1995, 1986, 1988, 1989; Sabloff, Binford and McAnany 1987; Shafer and Hester 1983). The riverine setting of K'axob, as suggested by its archaeological findings, allowed inter-site communication within the Maya area.

Formative Mesoamerica is a period of cultural transformation with the definition of political, economic, and social structures. In northern Belize, less attention has been given to analyze the social and political structures of Formative villages; therefore, Patricia McAnany recognizes the need to examine these fields. Using inferential methods, the K'axob Project critically evaluates archaeological remains to provide evidence of Formative social organization (McAnany 1995). Evidence of social organization could rely in understanding, for example, the significance of ancestor veneration (McAnany 1995).

The significance of ancestor veneration during the Formative period, however, requires further research in the Maya area. From the Formative period, elites used genealogical linkages to

revered dead ones to support and legitimize claims to positions of power and authority (McAnany 1995). The identification of ancestor veneration in the archaeological record is one of the objectives of the K'axob project. Presumably, iconographic elements and ritualistic or mortuary deposits provide evidence of this practice. In this regard, the K'axob project considers ceramic analysis as a tool to evaluate the cultural and temporal significance of ancestor veneration because of its ubiquitous presence in archaeological deposits.

In 1992, I received an invitation from Patricia McAnany to study the K'axob ceramics. Despite criticisms, I suggested a type:variety analysis to study the ceramics from K'axob because for more than three decades, the system has allowed an exchange of information and has linked sites throughout the Maya area. Previous use of the type:variety system, in my analysis of the Yaxchilan (1985-1990) and Pomoná (1989-1992) ceramics,[1] provided useful information to interpret the archaeological record.

In my attempt to fulfill the objectives of the K'axob project, I commenced the ceramic analysis by reviewing the literature for northern Belize. As a result of my observations, the existing chronological problems in northern Belize restrain the establishment of inter and intra-site comparisons, obscuring the interpretation of ceramic development. Ceramic results for northern Belize, so far, give the impression that it was an isolated area, not fully participating within the ceramic traditions of the rest of the Maya Lowlands. I will unveil the existing ceramic research problems for northern Belize (see Coe 1980; Marcus 1983, 1984; Andrews V 1990; Andrews V and Hammond 1990) to specify the objectives of the K'axob ceramic project.

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[1] The Yaxchilan and Pomoná projects were directed by Roberto García Moll and Daniel Juárez Cossío of the Instituto Nacional de Antropología e Historia. The Pomoná Ceramic Project was directed by the author and financed by the Instituto de Estudios Avanzados de la Universidad de las Americas-Puebla.

II.- THE SETTING OF CERAMIC RESEARCH IN NORTHERN BELIZE

In 1977, Pring revealed the presence of Early Formative ceramics in the main trench at Cuello. A total of 1900 sherds and a source of whole vessels (Hammond 1991a:7), found in stratigraphic phases 0-II, defined the Swasey Ceramic Complex (Kosakowsky and Pring 1991:62). Originally, the Swasey Ceramic Complex was dated between ca. 2600-1200 cal B.C. (Hammond et al 1976; Andrews V and Hammond 1990:570). The dating implied an earlier beginning for the Swasey Ceramic Complex than that of the Barra and Ocos Ceramic Phases of the Chiapas and Guatemalan Pacific Coasts, dated between 2000-1500 B.C. (Lowe 1978). The original dating, moreover, placed the Swasey Ceramic Complex before the San Lorenzo Bajio, Chicharras and Tabascan Pellicer ceramic phases, ranging in date between 1500-1250 B.C. (Lowe 1978).

The dating of Swasey ceramics made them coeval with Early Formative pottery found elsewhere in Mesoamerica (Andrews V and Hammond 1990:570), except for the fact that the ceramics did not resemble the Purron or Pox pottery and even less Olmec ceramics (Andrews V and Hammond 1990:571; Andrews V 1990:5). The Swasey Ceramic Complex had developed before the earliest Maya ceramics found at the sites of Altar de Sacrificios (Adams 1971:146) and Seibal (Willey 1970:320), respectively, the Xe (930-560 B.C.) and the Real (800-600 B.C.) Ceramic Complex (Table 1). Consequently, the chronological, typological, and archaeological results from the site of Cuello raised questions about the origin of Swasey (Marcus 1983:459; Andrews V and Hammond 1990:572). The first objection relates to the fact that Swasey ceramics look like any other eastern Mesoamerican Middle Formative ceramic complex (Andrews V 1990; Andrews V and Hammond 1990:572; Marcus 1983:459). The internally consistent series of early radiocarbon dates, however, could not assign Swasey as a Middle Formative antecedent of Lopez Mamom (Andrews V and Hammond 1990:572). The stylistic attributes of Swasey pottery did not support an early date before 1000 B.C. (Andrews V and Hammond 1990:579).

The challenging archaeological material from Cuello compelled a careful revision of the ceramics and the chronological data (Kosakowsky 1983, 1987a; Andrews V and Hammond

Table 1. CERAMIC SEQUENCES IN THE MAYA AREA

CORRELATION	TIME	MAJOR PERIODS	K'axob	Altar de Sacrificios	Barton Ramie	Seibal	Tikal	Uaxactun	Cuello	Colha	El Mirador	Chiapa de Corzo	Chalchuapa
11.10.0.0.0	1200	*LATE*	**Kimilkax**										Ahal
	1100												
10.10.0.0.0	1000	*EARLY*								Rana			Matzin
	900	*POSTCLASSIC*		Jimba	New Town	Bayal	Caban			Canos			
				Late Facet			Eznab	Tepeu 3		Yalam		Paredon	
10.0.0.0.0	800	*TERMINAL*		Boca	Spanish Lookout	Transition Tepejilote	Imix	Tepeu 2		Masson	Post Lac Na	Maravilla	Payu
				Early Facet									
	700			*Late Facet*									
9.10.0.0.0.	600	*LATE*	**Witskax**	Pasion	Tiger Run		Ik	Tepeu 1		Bomba	Lac Na	Laguna	Xocco
				Early Facet									
	500			Chixoy									
				Veremos				Tzakol 3				Jiquilpas	
9.0.0.0.0.	400	*EARLY*	**Nohalkax**	Ayn	Hermitage	Junco	Manik	Tzakol 2			Acropolis		
	300			Salinas				Tzakol 1		Cobweb		Istmo	Vec
8.10.0.0.0	200	*CLASSIC*			Floral Park		Cimi			Blossom Bank	Paixbancito		
	100											Horcones	*Late Facet*
			Terminal Facet	*Late Facet*			Cauac						
8.0.0.0.0	A.D. B.C. 100	*PROTOCLASSIC*	**K'atabche'kax**		Mount Hope	Cantutse						Guanacaste	Caynac
				Plancha			Chuen	Chicanel					*Early Facet*
7.10.0.0.0	200	*LATE FORMATIVE*	*Late Facet*		Barton Creek				Cocos	Onecimo	Cascabel		Chul
	300			*Early Facet*									
7.0.0.0.0	400		*Early Facet*	*Late Facet*	*Late Facet*	Escoba	Tzec	Mamom	Lopez	Chiwa	Monos	*Late Facet*	Kal
	500		*Late Facet*	San Felix								Francesca	
6.10.0.0.0	600			*Early Facet*	*Early Facet ?*							*Early Facet*	
	700		*Early Facet*				Eb						
6.0.0.0.0	800	*MIDDLE FORMATIVE*	**Chaakkax**	Xe	Jenney Creek	Real	?		Bladen	Bolay			Colos
	900												
5.10.0.0.0	1000												Tok
	1100	*EARLY FORMATIVE*							Swasey				
5.0.0.0.0	1200												

1990). The first revision by Laura Kosakowsky (1983, 1987a) relates to the subdivision of Swasey into a new ceramic phase called Bladen. The second revision addresses the problems behind the Cuello radiocarbon samples (Andrews V and Hammond 1990). The review culminated in a redefined ceramic sequence and a shortened chronology for the site of Cuello, raising problems for ceramic analysis in northern Belize.

A. *Problematic Issues Around the Establishment of the Swasey and Bladen Ceramic Complexes at Cuello*

In 1987, Laura Kosakowsky published a redefined sequence of Pring's original analysis of the ceramics. The 1980 investigations at the site of Cuello provided a larger sample of Swasey ceramics to Laura Kosakowsky than had been available to Pring (Andrews V and Hammond 1990:572). Kosakowsky (1983, 1987a) subdivided the Swasey Phase into Bladen (1500-1000 B.C.), placing the latter tentatively within the Xe ceramic sphere, based on parallels with the Xe and Real Ceramic Complexes (Andrews V and Hammond 1990:572). To establish Bladen, Kosakowsky (1983, 1987a) used only material from the 1980 excavations. Precisely, over 1300 sherds and 13 whole vessels determine Bladen (Hammond 1991a:7). The earlier Swasey complex was finally defined by 371 sherds and no whole vessels (Hammond 1991a:7). There are no given reasons why only the 1980 material was used by Kosakowsky to subdivide Swasey and why the other 229 sherds were not significant anymore. Discarding the material creates a significance problem to justify the establishment of the Cuello ceramic complexes.

In 1990, Andrews V and Hammond (1990) presented a redefined chronological sequence for the site of Cuello. The recalibration of the radiocarbon results suggested that the Cuello ceramic sequence began in the late Early Preclassic (Formative) or early Middle Preclassic (Kosakowsky and Pring 1991:61). Swasey was placed between 1200/1000 and 900 B.C., followed by Bladen (900-600 B.C.), that was the latter part of Pring's Swasey Ceramic complex (Kosakowsky and Pring 1991:61-62). Swasey was placed within the same general frame as the earliest pottery elsewhere in the southern lowlands (Andrews V and Hammond 1990:578). Bladen includes elements closely related to Swasey pottery together with others paralleled in

the Xe ceramic sphere of the southern Peten (Kosakowsky and Pring 1991:62). Clearly, the new dates ended the debate over the chronological place of northern Belize. At the chronological level, the problem was solved, but this resolution did not extend into the realm of ceramic classification. On the contrary, the reassessment raises questions about the establishment of Swasey and Bladen ceramic types.

1.- The Ceramic Classification Problems. Apparently, the reassessment of the Cuello chronology would not have any repercussion on the ceramic data from Cuello. Andrews V and Hammond (1990:573) accepted that although problems may remain in interpreting individual dates and their archaeological contexts, the pattern they present is clear and supports a placement of the Swasey and Bladen phases in the early Middle Formative. Many problems remain, unfortunately, to interpret ceramic development in northern Belize even after the reassessment of the Cuello chronology.

First, Swasey is now coeval with the Xe-Real ceramic traditions with this new dating; however, no Xe or Real ceramic types are reported for the site of Cuello. The presence or absence of Xe ceramics in northern Belize is critical to appreciating the inter-site distribution of these early ceramics and to understanding the settlement origins of northern Belize. Second, the equivalence in time compels a revision of the establishment of Swasey and Bladen types because Pring (1977a) and Kosakowsky (1983, 1987a) established the Cuello types before the reassessment of the Cuello chronology.

According to my analysis, the original dating of Cuello provided a rationale for Pring (1977a) and Kosakowsky (1983, 1987a) to establish the Swasey and Bladen types. Mainly, the reasoning behind the establishment of Swasey and Bladen types was the argument that the new ceramic units predated established types in other areas; this fact was enough to create new types and give them new names (Cf. Pring 1977a and Kosakowsky 1987a). For example, Pring established Patchchacan-Pattern-burnished: Patchchacan Variety based on 26 sherds (Pring 1977a and Kosakowsky 1987a:14). Pring identified this "new type" as an Unspecified Variety of Yotolin Pattern-burnished type, found in the Mani Cenote (Kosakowsky 1987a:14-15).

Kosakowsky chose to classify the Cuello pattern-burnished pottery as a "new type", because of the chronological disparity between the presence of pattern-burnishing at Cuello and the Yucatan (Kosakowsky 1987a:14-15). Quite possibly, the establishment of the Swasey and Bladen types relied more on the Cuello original dating than on the attributes of the ceramic material (Pring 1977a; Kosakowsky 1983, 1987a). In this regard, the original dating of the Swasey ceramic complex became a "ceramic attribute" for the establishment of many types and varieties (Pring 1977a; Kosakowsky 1987a).

Until 1987, Swasey was still dated between 2000-1500 B.C. and the Bladen dates were still placed between 1500-1000 B.C. (Andrews and Hammond 1990:572; Kosakowsky 1987b). In 1990, Swasey is placed around 1200/1000 and 900 B.C. and the Bladen Ceramic Complex is dated between 900-600 B.C. (Andrews and Hammond 1990; Kosakowsky and Pring 1991). With the new dating (Andrews V and Hammond 1990), there is no chronological disparity between types anymore. The Cuello "new types" do not predate anymore, previously established types or varieties in the Maya Lowlands. It is now critical to evaluate whether Patchchacan-Pattern-burnished: Patchchacan Variety is really a variety of the Yotolin Pattern-burnished type. If this is the case, then this creates a problem to draw inter and intra-site comparisons, moreover, a proliferation of new and redundant types and varieties.

Unfortunately, Kosakowsky and Pring followed similar arguments to establish most Swasey and Bladen types. In the next example, Kosakowsky (1987a:14) compares Copetilla Unslipped: Copetilla Variety to Achiotes Unslipped at Seibal (Sabloff 1975) and Altar de Sacrificios (Adams 1971). The difference between these two types was that Copetilla Unslipped: Copetilla Variety had a distinctive finish surface from the major unslipped ware, Achiotes Unslipped, at Altar de Sacrificios and Seibal (Kosakowsky 1987a:14). Evidence shows that preservation conditions are much better in northern Belize than in the Peten. Kosakowsky (1987a:14) decided to establish a new type because Copetilla Unslipped: Copetilla Variety predated these examples, and disregarded that the characteristic double cylinder handle of Copetilla Unslipped: Copetilla Variety is depicted on the unslipped storage jars from San Jose

in the San Jose I period (Thompson 1939:Figure 221) and on the unslipped types at Uaxactun in Period Ia (Ricketson and Ricketson 1937:Figure 152 d).

In another example, Kosakowsky (1987a:17) suggests that Backlanding Incised: Backlanding Variety bears some similarity to the postslip incised monochrome red sherds from the Xe Ceramic Complex at Altar de Sacrificios and the Real Ceramic Complex at Seibal:

> "However, the incised type at both these sites, Pico de Oro Incised, is later in date than the Swasey Backlanding Incised" (Kosakowsky 1987a:17).

Kosakowsky (1987a:26), moreover, describes Fireburn Red-and Cream: Fireburn Variety as being modally similar to the Xe-Real red-on-cream types of Altar de Sacrificios (Adams 1971) and Seibal (Sabloff 1975):

> "In vessel form it is similar to Muxanal Red-on-cream of the Ah Pam Ceramic Complex at Yaxha Sacnab (Rice 1979), although the Cuello type predates it" (Kosakowsky 1987a:26).

Kosakowsky (1987a:33) established Tower Hill Red-on cream: Tower Hill Variety following a similar pre-dating argument. Kosakowsky (1987a:33) suggests that the type is similar to a red-and-white bichrome from Chiapa de Corzo.

> "There is only a broad similarity to Aac Red-on-buff at Tikal and at Yaxha-Sacnab (Rice 1979), and to Toribio Red-on-Cream Type-Toribio Variety at Altar de Sacrificios (Adams 1971), all of which apparently postdate the Cuello type" (Kosakowsky 1987a:32).

With the recalibration, the red-on-cream ceramic tradition, more commonly found in Chiapa de Corzo (Adams 1971:117) than in the Xe ceramics, coexists with the Swasey Fireburn Red-and

Cream: Fireburn Variety and Tower Hill Red-on cream: Tower Hill Variety (Kosakowsky 1987a:33).

In another example, Kosakowsky (1987a:28) indicates that Cudjoe Composite: Cudjoe Variety is similar in form and decoration to Chacchinic Red-on-orange brown at Barton Ramie and to Yalmanac Impressed: Unspecified Variety at Seibal, although these postdate the Cuello type. Kosakowsky (1987a:21) specifies that there are no time comparisons for Chacalte Incised: Chacalte Variety, however, Chompipi Incised, the monochrome black incised type from both Seibal and Altar de Sacrificios, bears a faint resemblance.

Clearly, Kosakowsky (1987a) and Pring (1977a) created new types because these predated types or varieties already established in the Maya Lowlands. Pring (1977a) and Kosakowsky (1983, 1987a), unfortunately, followed this principle to create the Bladen types. Kosakowsky (1987a:25) compares Barquedier Grooved-incised to the red incised types of the Real Ceramic Complex at Seibal (Sabloff 1975) and the Xe Ceramic Complex at Altar de Sacrificios (Adams 1971). According to Kosakowsky's (1987a:26) observations the type is similar in form to Pinola Creek Incised: Variety Unspecified in the Jenney Creek Ceramic Complex at Barton Ramie (Gifford 1976:Figure 30j-n), although Barquedier Grooved-incised predates the Barton Ramie type.

As clearly exposed in the above examples, the ceramic attributes of a ceramic unit were secondary in some cases to Pring (1977a) or Kosakowsky (1983, 1987a) to establish the Swasey and Bladen types. It is true though, that each type must have a definable time and space position to acquire cultural significance (Gifford 1976:9-10). Gifford (1976:10), however, specified that time and space distributions associated with a ceramic unit are determined only after the variety or type has first been recognized and isolated in the physical sense. Pring (1977a) and Kosakowsky did not follow this principle of the type:variety system. Consequently, the reassessment of the dating must have an impact on the Cuello ceramic sequence.

I do not discard the possibility that the "new Cuello types" have enough ceramic attributes to be separated from other types in the Maya Lowlands. However, one should also question whether the differences suggested by Kosakowsky (1987a) and Pring (1977a) really support the establishment of new types. To establish new types and varieties (Pring 1977a; Kosakowsky 1987a), ceramicists in northern Belize have given primary importance to decoration. In various cases, a slight differentiation in the characteristics of a ceramic unit, a lighter, or darker color of a slip, justified the creation of a type (Pring 1977a; Kosakowsky 1987a). The establishment of the Grooved Incised Variety of the Guitara Incised type is a good case example (Kosakowsky 1987a:43-44). Kosakowsky (1987a:43-44) confirmed the establishment of the variety, based on the deep executed lines in these sherds. Kosakowsky (1987a:44) refers to a grooved line as a shallow incision, measuring .1 to .2 cm wide. Sabloff (1975:65) included a similar rank to define the incised lines of the Guitara Variety.

The establishment of Consejo Red: Consejo Variety follows similar arguments (Kosakowsky, 1987a:16). At Cuello, Consejo Red: Consejo Variety is characterized by a glossy red slip over a creamy white, pale buff, or orange underslip or wash (Kosakowsky 1987a:16). According to Kosakowsky (1987a:16), the underslip is very thin and on some sherds it is difficult to detect its presence. Kosakowsky (1987a:16) reports Consejo Red: Consejo Variety to be similar in forms to the Xe and Real ceramic material. Kosakowsky notes that at Altar de Sacrificios, Abelino Red: Abelino Variety has a thin slip over a buff under surface and when compared to Consejo Red, it tends to be lighter in color and not as glossy (Kosakowsky 1987a:16). Pring (1977a) or Kosakowsky (1987a) do not specify whether the surface finishing of Cuello types represents an achievement in the ceramic manufacture of the type. Even if Kosakowsky and Pring could argue that the surface finishing is significant to ceramic manufacture, the difference does not justify the creation of a type, but a **variety**. The reassessment of the Cuello dates makes Consejo Red: Consejo Variety coeval with Abelino Red: Abelino Variety. In other words, Consejo Red: Consejo Variety presents the same ceramic attributes as Abelino Red: Abelino Variety from Altar de Sacrificios (Adams 1971) except that, before the reassessment of the Cuello dates, Consejo was an earlier type and was glossier than Abelino Red.

Further analysis of the establishment of other Swasey and Bladen types, concludes that the number of sherds is very low to support the creation of some Swasey and Bladen types (Pring 1977a and Kosakowsky 1987a, b). For example, Pring (1977a) established Tower Hill Red-on-cream: Tower Hill Variety based on 8 sherds. Kosakowsky (1987a:28) created Cudjoe Composite: Cudjoe Variety based on only four rim sherds. Pring (1977a) defined Chacalte Incised: Chacalte Variety based on 2 sherds. Though it is possible that the low representation could be significant in qualitative terms, the Cuello types do not have enough distinctive elements to be separated from the Central Peten types. As a result, the differences suggested by Kosakowsky (1987a) and Pring (1977a) do not justify the creation of the Cuello new types.

In summary, Kosakowsky (1987a) or Pring (1977a) did not have **substantial number of attributes** to separate the "new type" from the "old type". In the recognition of a type, a ceramicist identifies types and varieties as clusters of attributes. Kosakowsky and Pring had **only one profoundly distinct** element to separate the types, the dating, which we understand is not part of the definition of a type. Instead, Kosakowsky and Pring should have created varieties of these already established Peten and Rio de la Pasion types, as Pring (1977a) did originally for the Unspecified Variety of the Yotolin Pattern-burnished type.

B. *The Adoption of the Shortened Chronology and its Consequences to Ceramic Analysis in Northern Belize*

The reassessment of the Cuello chronology and the adoption of a shortened chronology raises many questions for ceramic research in northern Belize. The chronology for Cuello has been shortened (Andrews V and Hammond 1990), but not before the establishment of the ceramic sequences for northern Belize (Fry 1983; Robertson and Freidel 1982; Valdez 1987; Reese and Valdez 1987). The establishment of new types and varieties for northern Belize relies on the ceramic monograph from Cuello (Kosakowsky 1987a), that is essential to ceramic classification in northern Belize (Fry 1983; Robertson and Freidel 1982; Valdez 1987; Reese and Valdez 1987). Necessarily, a shortened-chronology for the site of Cuello implies repercussions for the interpretation of ceramic sequences in northern Belize. Specifically, it is necessary to address

(1) whether the new types are really varieties of Xe-Real types, otherwise, the new Cuello types repeat the already established Peten-Pasion types, (2) the implications of the presence or absence of Xe ceramics because they relate to the first farming population in the lowlands; therefore revising considerably our appreciation of northern Belize, (3) whether the identification of Xe ceramics in northern Belize can help in tracing the origins of Swasey ceramics, (4) the existence of a Swasey ceramic sphere for northern Belize.

1.- The Characteristics of Xe Ceramics. The earliest settlers to arrive to the Maya Lowlands carried an Olmec tradition or at least a Gulf-Pacific Coast affiliation, that is evident in their ceramic and ritual assemblage (Adams 1971; Sabloff 1975). The ceramic assemblage of these early inhabitants defines the Xe occupation at the sites of Altar de Sacrificios and Seibal (Adams 1971; Sabloff 1975). Xe ceramics relate to the first farming population in the lowlands (Gifford 1976:61; Willey 1977:400). The characteristics of the Xe Ceramic Complex, such as the single unbridged spouted jars, tie together the earliest Yucatan, Peten, Belize and El Salvador with a separate tradition of Mani-style water bottles or narrow mouth jars (Lowe 1978:366). The most important decoration features comprise circumferential lines of connected arcs, as well as the incised double-line break on the exteriors or interiors of bowls, dishes and plates (Andrews V 1990:8). The characteristics of Xe ceramics indicate strong affiliations to earlier ceramic complexes in the Gulf and Pacific Coast areas. Specifically, the Xe and Eb complexes of the Peten appear to derive from the Early southern Mesoamerican tradition of Duende, Conchas I, Dili (Chiapa II) and Escalera (Chiapa III) phases of Chiapas Nacaste in the Olmec region; from Puente in the Chontalpa; and even from the Colos Ceramic Complex (900-650 B.C.) at Chalchuapa in El Salvador (Adams 1971:153; Willey 1977:400; Sharer 1978). Xe pottery is well developed technically and is not the work of people learning to make ceramics (Andrews V 1990:8). Clearly, Xe developed from earlier ceramic complexes in the Gulf and Pacific Coast areas (Adams 1971), but not during the splendor of Olmec society. The arrival of Xe settlers occurred during the Middle Formative Period, after the collapse of San Lorenzo and the gradual decline of La Venta (Sabloff 1975:230).

2.- The Identification of Xe Ceramics in northern Belize. Marcus (1984:830) previously suggested that Swasey, as originally defined by Pring (1977a), is possibly a regional variant of Xe, as the complex looked more like a Middle than an Early Formative complex. I agree with Marcus (1984:830) that Swasey is possibly a regional variant of Xe. Marcus (1983, 1984) based her assumptions on the ceramic forms and decoration. I base mine on the ceramics from K'axob; on my review of ceramic collections for northern Belize; and on the ceramics and classification procedure followed at Cuello (Cf. Pring 1977a and Kosakowsky 1987a).

Review of ceramic collections corroborated my observations that Middle Formative ceramics from K'axob share a Xe ceramic tradition. I studied ceramic collections from various sites in Belize available at the Archaeology Department in Belmopan and the University of Texas at Austin. While visiting the ceramic collections housed at the Centro Regional de Yucatan (CRY-INAH), I became aware of the distribution of northern Belize ceramic traditions into the Yucatan Peninsula (Ball 1977a). The available collections at the Musee de l'Homme in Paris confirmed my observations that the Formative pottery shared numerous trends with Central Peten, the Guatemala Highlands, Honduras and El Salvador. Quite possibly, this is the case for other ceramic collections in northern Belize such as Colha, Kichpanha, and Cuello.

Interestingly, the ceramic literature for northern Belize does not report Middle Formative types and varieties from the Peten-Pasion regions. More intriguing is the fact that there is a total absence of Xe types in the Bladen ceramic complex (Kosakowsky 1987a). Kosakowsky (1983) established the Bladen ceramic complex because it includes elements closely related to Swasey pottery together with others paralleled in the Xe ceramic sphere of the southern Peten (Kosakowsky and Pring 1991:62). Evidently, Pring (1977a) and Kosakowsky (1987a) describe and compare the types from Cuello with already existent Xe ceramic types in the Maya Lowlands. If one follows the type:variety system, then, how is it possible that, a ceramic complex within a particular ceramic sphere does not share the same types?

Further review of ceramic literature revealed that in 1979, Adams and Valdez reported Xe material in the ceramic assemblage from Colha. Almost ten years later, when Valdez (1987)

presented his doctoral dissertation, the ceramic assemblage had different type:variety names, specifying in its descriptions that some of them could be associated with Peten types (see Adams and Valdez 1979 and compare to Valdez 1987). In 1987, the new terminology referred to the types and varieties established at the site of Cuello (Valdez 1987). I proceeded to analyze the reasons behind such change, as I was trying to place the ceramics from K'axob into types and varieties already defined at other sites.

Adams and Valdez (1979:74) identified "a handful of Xe materials" (including Abelino Red), in the preliminary report on the Colha sequence. Adams and Valdez (1979) presented their Mamom complex as an extension of the one in Central Peten. If one compares the article written by Adams and Valdez in 1979, with Valdez' (1987) doctoral dissertation, then, a type such as Abelino Red is not present anymore in the ceramic assemblage from Colha. I presume that the dating of Cuello had a strong influence in the classification of the ceramics of northern Belize, as in the beginning, Adams and Valdez (1979) established Peten types for Colha. The identification of Xe ceramics at Colha (Adams and Valdez 1979) corroborated my initial observations that (1) the original dating of the Swasey Ceramic Complex was fundamental to ceramic classification in northern Belize, (2) and that several types in the Cuello ceramic collection are Xe related, for example, Consejo Red: Consejo Variety is more certainly Abelino Red. I had the opportunity to discuss the classification procedure at Colha with Fred Valdez, agreeing that Abelino Red was identified later as Consejo Red (Valdez, personal communication 1994).

Consequently, this is creating several problems. The first one relates to the proliferation of new and redundant types and varieties in the ceramic literature from northern Belize, previously noted by Valdez (1987). Valdez (1987:51) remarks that the proliferation of type names makes it difficult to assign any one name as an equivalent to those from other sites. Valdez (1987:51) noticed that often one type at Colha may apply to two or more types represented elsewhere. Valdez (1987) appreciated the problem and made the effort to assign Colha ceramics to existing types or varieties. For the ceramic identifications, Valdez (1987:52) decided at the time to use the name of the type from the site physically closer to Colha to avoid further

confusion. To define a Sierra ceramic unit, Valdez used the Cuello's Sierra Red: Big Pond Variety instead of Cabro Red: Cabro Variety from Cerros (Robertson and Freidel 1982) even though the characteristics are the same for both established types. Valdez (1987) presented a thoughtful solution by specifying the similarities between the types in his descriptions, but, Sierra Red: Big Pond Variety is simply Cabro Red: Cabro Variety from Cerros. Moreover, not all the ceramicists working in northern Belize followed Valdez' solution. The clarification, however, does not solve the problem of having one type with two different names in the same area or the arduous task of looking out for the similarities or differences in the types and among the types in the same region. The clarification, instead, helps to appreciate that in northern Belize duplication of types exists.

For those of us interested in ceramics a crucial part of our scholarship involves inter-site comparisons of types and varieties. Through this proceeding, we establish a connection with different areas. If nonceramic researchers in the Maya area want a short reference to the types integrating a ceramic complex, however, we are forcing them into the arduous task of finding out why types have double names. It is also possible that a duplicating type or variety will be exported into far away geographical areas, confusing our regional studies even more. Certainly, this was not the purpose of the type:variety system (Smith and Gifford 1966). The solution does not rely in explaining the existence of duplicated types, rather, in revising "the received classification", as Forsyth suggested (1989:7), to better reflect the actual relationships in Maya Lowland pottery.

Presumably, part of the Swasey and Bladen types represent already established Peten-Pasion types, or at least, varieties of such types. Hammond (1991a:6) agrees that contemporaneity between Bladen and Xe is demonstrable, with both modal and some typological equivalence. Hammond (1991a:6), however, believes that the Xe sphere itself is a southwestern Peten entity, probably not reaching as far northeast as Tikal. Additionally, Kosakowsky and Pring (1991:62) believe the origins of Swasey ceramics are obscure with no clear derivation from either the Maya Highland zone to the South or from the Gulf Coast of Mexico to the West. I believe the original dating from Cuello, which resulted in the duplication of types, is limiting

the identification and distribution of Xe ceramics into northern Belize and obscuring the Xe origins of Swasey ceramics. If the new dates would have been available to Pring and Kosakowsky during the classification of the Cuello ceramics, then, would they have established new types, or simply varieties of those types found in the Peten-Pasion regions?

3.- The Cultural Mesoamerican Background of Xe Ceramics. Even after the reassessment, Hammond supports the argument that Swasey began late in the second millennium B.C. on the dating of the Xe sphere and due to the stratigraphic position of Swasey below Bladen (Andrews V and Hammond 1990:579). The suggested date by Hammond (Andrews V and Hammond 1990:579) places Swasey before the development of Xe ceramics in the Peten-Pasion regions. Instead, Andrews V (Andrews V and Hammond 1990:579) claims it is unlikely that Swasey began before 1000 B.C., based on the available dating and the historical background of the distribution of Xe ceramics in the Peten and the Rio de la Pasion regions. The following brief history of Early Formative times integrates Andrews' argument and my observations that Swasey ceramics originated from Xe and Real ceramic traditions.

In 1978, Lowe suggested an estimated date of 2000 B.C., for the beginning of the Early Preclassic in eastern Mesoamerica (Willey 1978:535). Lowe (1978) divided the Early Formative into three subperiods, corresponding to major cultural events in the history of eastern Mesoamerica. The definition of these three subperiods was based on ceramic evidence, radiocarbon dates, and other horizon markers. The Early Preclassic I Subperiod (2000-1500 B.C.) includes the development of ceramics along the Chiapas and the Guatemalan Pacific Coasts (Lowe 1978). The Early Preclassic II Subperiod (1500-1250 B.C.) is the earliest known period of Olmec society and relates to the site of San Lorenzo (Lowe 1978). The Early Preclassic III Subperiod (1250-1000) sees the rise and decline of the remarkable Olmec society in the Isthmian region (Lowe 1978:355) and marks the beginnings of the Middle Preclassic Period (Willey 1978:535).

Olmec society developed a dynamic religious and social organization, which brought people throughout Mesoamerica into their realm, as evidenced by widespread Olmec ceramic style horizon and iconography, depicted especially in sculpture and lapidary products. The evidence

is concentrated along the Greater Isthmus of Tehuantepec to the Chiapas Highlands and the Pacific slopes of Chiapas and Guatemala (Lowe 1978:355). The farthest southern extension of this material occurs during the Tok complex at Chalchuapa (Lowe 1978:355). Contacts between societies in El Salvador and the Motagua region along the Pacific Coast of Guatemala to coastal Oaxaca would not be surprising either, since this is area is a natural traffic corridor (Pye and Demarest 1991). The existence of a Pacific Coast route to the Rio Paz near Chalchuapa and then to the Motagua River gave access to the sources of jade, obsidian, and other materials (Adams 1991; Pye and Demarest 1991). Through this corridor traveled many small Olmec horizon portable objects, some of great value, such as jade, cups and bowls, that were incised with the flaming eyebrows or paw-wing motifs of the fire serpent or were-jaguar (Blanton et al. 1993:167). In the Peten, the farthest dispersal of an Olmec style occurs at Seibal (see Sabloff 1975).

Blanton et al. (1993:167) suggest that the distribution of elements related to the Olmec horizon did not occur in the eastern lowlands because in this area, populations were not organized yet into regional societies with strongly defined boundaries and had little in the way of institutionalized, clan ranking of persons or social segments. People of the eastern lowlands were organized in flat open network social systems and had little institutionalized hierarchy (Blanton et al. 1993:167). New available data for Belize is contradicting this view. Recent excavations at the site of Cahal Pech indicate the presence of Olmec style figurines (Awe 1993). Such findings increase the expansion of an Olmec-style eastern-lowland boundary and support the distribution of the Olmec style to the Peten and the Belize River Valley.

Major events in these regions shaped the Middle Formative in the Maya Lowlands (Lowe 1978). Lowe (1978) divided those events into three subperiods. During the Middle Preclassic I Subperiod, La Venta begins the Complex A construction, with dramatic changes in the architectural setting (Lowe 1978:359). At La Venta, the Middle Preclassic pottery is recognized by the white-to buff ceramic ware in which a flat-bottom, flaring wall bowl is the most common form and the incised double-line break on the interior lip of the rim. Deposits of La Venta Middle Formative Ceramics are found at numerous sites in Central and Southern

Chiapas, belonging to the Dili Ceramic sphere. Dili complex must be coeval with the transitional Phases I and II at La Venta, the late Jocotal Phase at Altamira, Salinas la Blanca and Izapa (Lowe 1978:361).

The Middle Preclassic II Subperiod pottery (800-600 B.C.) witnessed for the first time a strong ceramic occupation of all extremes of the Yucatan Peninsula, including the Southern Peten Region (Lowe 1978:365), where the Xe ceramic tradition is present. The dates for this subperiod correspond to the occupation of Altar de Sacrificios and Seibal (Adams 1971 and Sabloff 1975). The presence of a Xe ceramic tradition at K'axob, Becan (Ball 1977a), Colha (Adams and Valdez 1979), possibly Kichpanha (Reese and Valdez 1987) and Cuello (Cf. Pring 1977a; Kosakowsky 1987a) reveals the continuation of the "earliest" ceramic traditions of the lowlands into northern Belize, quite possibly through the same routes that allowed contact and communication with the Belize Valley. As I expressed before, the presence or absence of Xe ceramics in northern Belize is very significant to appreciate the inter-site distribution of these early ceramic trends, but also, to understand the settlement origins of this area. Possibly, this could lead to understanding the transition to the Middle Preclassic III Subperiod (600-400 B.C.), relating to the well recognized Mamom period of the Maya Lowlands (Willey 1978:535).

4.- The Definition of the Swasey Ceramic Sphere for northern Belize. The reassessment of the Cuello chronology and the adoption of a shortened chronology created far-reaching implications for ceramic analysis in northern Belize. The classification problems, hereby presented, raise also questions about the establishment of Swasey and Bladen as two separate ceramic complexes. The differences between these two complexes are not great, as previously observed by Hammond and Andrews V (1990:572). Andrews V, moreover, is not convinced that the ceramics are sufficiently different to warrant separation into two complexes and thinks that the differences Kosakowsky (1983, 1987a) carefully demonstrated to separate Swasey from Bladen, more likely would define facets of a single ceramic complex in most other Formative period lowland sequences (Andrews V and Hammond 1990:579).

Additionally, a definable Swasey complex has so far been found only at Cuello (Hammond 1991a:7). Sites in northern Belize do not share the majority of their types with Cuello. K'axob, for example, shares only one type of the Chicago Group. The earliest deposits at Colha contained the Swasey Chicago Orange type, as well as, types linked to Xe and to early Mamom variants (Potter, Hester, Black, and Valdez 1984:628). The existence of a new ceramic sphere for northern Belize, therefore, is still very unclear due to typological problems in the establishment of the Cuello types. A ceramic sphere exists when two or more complexes, separated in space, share a majority of their most common types (Willey, Culbert, and Adams 1967:306-314). Without a revision of the establishment and a reassessment of the Swasey and Bladen types, it will be difficult to determine a Swasey ceramic sphere.

III.- RESEARCH GOALS OF THE K'AXOB CERAMIC PROJECT

Research climate for a study of Formative ceramics in northern Belize proves to be a challenge for the classification of the K'axob ceramics. The main concern of the K'axob ceramic analysis is to make a contribution to the understanding of the Formative period in northern Belize. As an archaeologist, I am interested in reconstructing the cultural history of K'axob, not only its ceramic sequence.

The application of the type:variety system to the K'axob ceramics seems a reliable way to accomplish the objectives of the K'axob ceramic project. Choosing the type:variety system to analyze the ceramic sequence from K'axob is no coincidence. Most scholars study ceramic assemblages in the Maya Lowlands using this method (Smith 1955, Smith and Gifford 1966; Adams 1971; Sabloff 1975; Gifford 1976; Ball 1977a; Sharer 1978; López Varela 1989, 1994). The system facilitates intensive comparative evaluations with outside areas that are critical to understand ceramic development. Furthermore, the type:variety system was conceived as a way to standardize procedures in the classification of ceramics in the Maya area (Willey, Culbert, and Adams 1967). The type:variety system (Smith, Willey, and Gifford 1960), therefore, accomplishes the need to reconstruct the history of this Formative village. Consequently, I have defined the objectives of the K'axob ceramic project within what Orton,

Tyers and Vince (1993:23) referred to as the "big three" of ceramic analysis: (1) to provide a chronological framework, (2) give distribution evidence of the pottery in time and space, (3) and determine the functional aspects of the ceramics.

The establishment of a temporal framework is key to cultural and chronological interpretation. K'axob requires a precise temporal framework to use in the dating of structures, but also in placing the onset of ancestor veneration. The chronology would also illuminate the significance of K'axob within northern Belize and the rest of the Maya Lowlands. For this study, I will establish the K'axob Ceramic complexes, based on the ceramics, radiocarbon dates, the stratigraphy, architectural phases, and Harris matrixes. With these elements, I hope to confirm the temporal placement of the K'axob ceramic complexes, providing evidence on the distribution of pottery in time.

The archaeological context of the ceramics is relevant data for ceramic and chronological interpretation. The contextual definition of the ceramics is an important goal of the ceramic project, as it will give evidence of its function and its role in ancestor veneration. Comparative studies of the ceramics with other artefact assemblages from K'axob are also crucial to a better understanding of the function of pottery in a particular context. The contextual definition of the ceramics will broaden inter-site comparisons, supporting an integrated chronological assessment of northern Belize. An integrated site-study, moreover, will help to define ceramic continuities and changes through time. With the following ceramic study, I hope to clarify some of the long-debated problems in northern Belize.

Chapter II: Procedures and Methods

THE ESTABLISHMENT OF THE CERAMIC COMPLEXES AT K'AXOB

The K'axob Project decided to excavate the structures and plazas of main ceremonial areas and household units to reconstruct the history of the site. Seven horizontal exposures in structures and plazas comprise the archaeological excavations at the site of K'axob. The excavations conducted at Structure 18 (Operation I), Structure 98 (Operation VII), Structure 102 (Operation VIII), central patio of Structures 32, 33, 34, 35 and 94 (Operation X), Structure 27 (Operation XI), Structure 28 (Operation XII), and Structure 93 (Operation XIII), therefore, provided the ceramic material for the present study (Figure 2.1). The excavations yielded also surface collections for the ceramic analysis. Such provenience refers to a mixed context with a wide range of types and varieties from the Formative to the Postclassic periods. Consequently, the excavation methods provide for controlled provenience of the ceramics. I will describe the excavation procedure at K'axob and its terminology to contextualize the establishment of the ceramic sequence. I emphasize that a detailed presentation of the excavations and the stratigraphy is reserved for a separate volume by Patricia A. McAnany.

I.- PROCEDURES AND METHODS OF THE K'AXOB CERAMIC ANALYSIS.

A. The Excavations at K'axob: Terminology and Definitions

Excavations at the site began with the location of those areas that could maximize the accessibility of Formative deposits. In most cases, the excavation in front of a final construction phase quickly exposed Formative deposits (McCormack 1994). In addition, by placing the excavation in front of

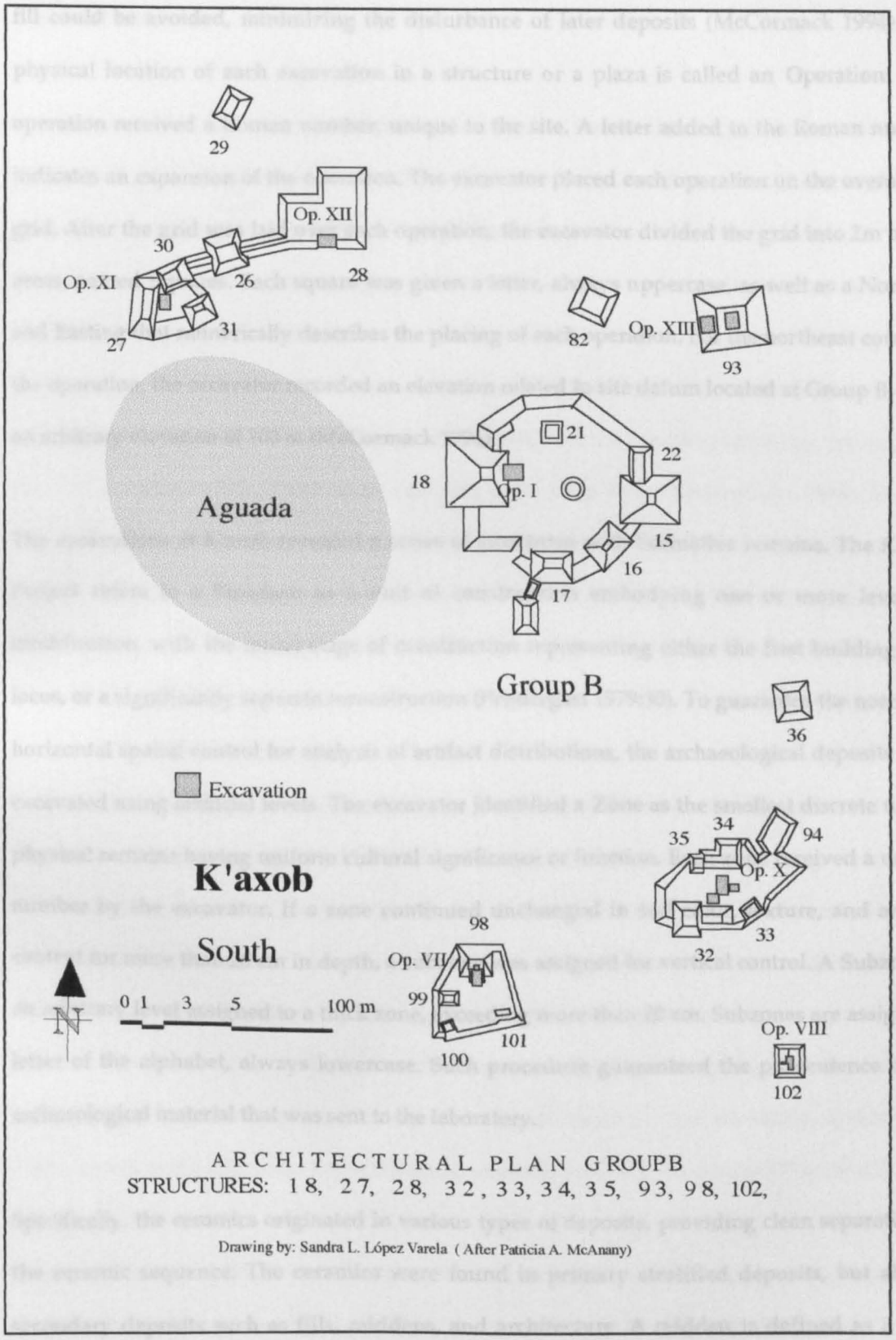


Figure 2.1 Architectural Plan of the Site of K'axob (After McAnany 1993).

the final phase of construction, the excavation of deep stratigraphic deposits of later construction fill could be avoided, minimizing the disturbance of later deposits (McCormack 1994). The physical location of each excavation in a structure or a plaza is called an **Operation**. Each operation received a Roman number, unique to the site. A letter added to the Roman number indicates an expansion of the operation. The excavator placed each operation on the overall site grid. After the grid was laid over each operation, the excavator divided the grid into 2m by 2m areas, named **Squares**. Each square was given a letter, always uppercase, as well as a Northing and Easting that numerically describes the placing of each operation. For the northeast corner of the operation, the excavator recorded an elevation related to site datum located at Group B, set at an arbitrary elevation of 100 m (McCormack 1994).

The excavations at K'axob revealed a series of structures with Formative remains. The K'axob Project refers to a **Structure** as a unit of construction embodying one or more levels of modification, with the initial stage of construction representing either the first building on a locus, or a significantly separate reconstruction (Pendergast 1979:30). To guarantee the necessary horizontal spatial control for analysis of artifact distributions, the archaeological deposits were excavated using artificial levels. The excavator identified a **Zone** as the smallest discrete unit of physical remains having uniform cultural significance or function. Each zone received a unique number by the excavator. If a zone continued unchanged in soil color, texture, and artifact content for more than 20 cm in depth, a subzone was assigned for vertical control. A **Subzone** is an arbitrary level assigned to a thick zone, exceeding more than 20 cm. Subzones are assigned a letter of the alphabet, always lowercase. Such procedure guaranteed the provenience of the archaeological material that was sent to the laboratory.

Specifically, the ceramics originated in various types of deposits, providing clean separation of the ceramic sequence. The ceramics were found in primary stratified deposits, but also in secondary deposits such as fills, middens, and architecture. A **midden** is defined as a light brownish-grey to dark-brown or dark-grey silty clay with a high organic content (charcoal flecking) and a high frequency of artifacts. Middens were useful to define a ceramic complex, especially when sealed by a floor. Ceramics appeared in **construction fills**, commonly composed

of stark-white yellow or gray material, which was quarried and transported for the building of floors and platforms.

Excavations of the structures yielded a series of stratified floors containing ceramics. A floor is a unit of hard-packed white to yellow *sascab*, with a smooth upper surface, and is less than 20 cm in thickness. *Sascab* is a powdery white or light yellow limestone derivative. At K'axob, *sascab* occurs in natural soil profiles beneath the gray clay of the B-Horizon, which is itself beneath the dark humid layer of the A-Horizon. Some of the floors exhibited signs of localized burning which confirmed the identification of the strata as floor units (Jackson 1992). On any given floor, various above-ground construction features might be present, such as a raised plaster cap, construction fills, free-standing-walls, plaster floors, retaining walls, steps or patched surfaces. Often, features intruded into the floors, for example, pits, sherd-lined pits, burials, caches, or fire features. The ceramic material obtained from these Formative deposits comprises both utilitarian and non-utilitarian ceramics. In this regard, the evidence supports a comprehensive ceramic collection to define the K'axob ceramic sequence.

1.- Excavated Structures at the Site of K'axob. The study of Structure 18 originated in 1981 by means of a 2 X 4 m test trench. The 1981 trench began at the present-day living surface and extended down to a buried paleosol that itself overlay a sterile deposit of limestone bedrock. In 1981, the excavation revealed the presence of a series of finely laminated floor units constructed directly above a buried paleosol (McAnany 1992:353-354). In 1990, the excavation was expanded to a 6 X 8 m area exposing the east side of Structure 18, a Classic period pyramid and underlying multi-phased house structures (Middle and Late Formative). The excavations, therefore, concentrated on the Late and Middle Formative deposits overlying the paleosol (Figure 2.1).

Structure 28 is one of the residential structures that encircle Group B, connected by platforms to Structure 26 and Structures 27 (Figure 2.1). The excavation of Structure 28 (Operation XII) was originally studied in 1992 by St. Laurent, by means of a 2 m X 2 m test unit (Henderson 1994). The excavation was designed to expose the edge of Structure 28 (Figure 2.1). In 1993, a 6 X 6 m grid

was placed around the earlier 2 X 2 m unit to understand the residential context of Structure 28 (Henderson 1994).

Structure 27 (Operation XI) locates on a topographic rise in the land surface (Figure 2.1). Structure 27 is approximately 200 meters from the eastern bank of the southern arm of Pulltrouser Swamp (McCormack 1994). A large *aguada*, near Structure 27, was used as a quarry for *sascab* (McCormack 1994). During 1981, two 1.5 by 1.5 m test trenches were excavated at Structure 27 m which is the western most structure of a patio group. This group, situated on the same ridge as Structure 27, is the focus of Structure 28. In 1992 and 1993, Structure 27 was excavated by means of 2 X 2 m excavation units, to a depth of 2.8 m (McCormack 1994).

The group formed by Structures 32, 33, 34, 35 and 94 (Operation X) locates approximately 120 m southeast of the large aguada, near Structure 27 (Figure 2.1). The excavations focused on the central patio to document the construction of an intermediate sized residential compound, but also, to provide additional data on household growth and community integration. Initially, a 4 m X 4 m grid was placed north of Structure 32, the largest structure of the patio group. The first 2 m X 2 m uncovered the southern portion of a large bedrock feature, so the excavation was expanded to the south and to the east. The total excavation depth was 1.7 m below the ground surface (Henderson 1992).

Structure 102 is located at the southern extent of the K'axob settlement (Figure 2.1). No house mounds have been identified as existing to the south of Structure 102. Nearby house mounds include Structures 98 to 101, located 160 m to the northwest (McCormack 1992). The excavations consisted of a single 1 m X 2 m test trench, placed within this mound to determine the temporal occupation of this structure. In 1992, excavations were expanded off the original trench, adding six 1 m X 2 m excavation units, one 1 X 5 m and one 5 m X 2.5 m.

In 1992, it was decided to excavate Structure 98 (Operation VII) to test the hypothesis that during the Middle to the Late Formative a change may have occurred in the function of the architecture (Estrada Belli 1992). The excavation (Operation XIII) of Structure 93 began in 1992, in an attempt

to establish a basic chronology of occupation (Martonova 1993). Structure 93 is a large, low-lying platform located 1.60 m northeast of the main excavation at Group B. Structure 93 is also closely positioned to the large aguada located west of Group B. Both excavations were investigated by means of 2 X 2 m units (Figure 2.1).

II.- THE EVIDENCE USED TO DEFINE THE K'AXOB CERAMIC COMPLEXES

A. *The Type:Variety Analysis to Support the Establishment of the Ceramic Complexes*

The ceramics obtained from the excavations were classified into types and varieties, described in Chapter IV. Types and varieties combine into ceramic complexes based on consistent contextual associations, recognizing that the ceramic attributes are useful in making chronological and cultural evaluations (Ball 1977a:3). The type:variety system defines the ceramic complex as an instrument for dating a site (or sites) through the recognition and identification of the ceramic units represented in it (Gifford 1976:11). Ideally, one assumes that types and varieties within each layer are contemporaneous with each other and with any other cultural material contained in each layer. Types and varieties do not behave idealistically in the archaeological record at K'axob. Types or varieties are introduced during a ceramic complex and they continued to be use throughout the next ceramic complex. This phenomenon does not refer to mixed deposits, but rather to primary contexts.

Results from the type:variety system rarely report the existence of ceramic groups or types cross-cutting ceramic complexes (Cf. Sabloff 1975; Gifford 1976). Even if there is an obvious continuity in the physical characteristics of the pottery, ceramicists assigned a new phase, ceramic complex, new types, and group names (Forsyth 1989:5). As rightly observed by Forsyth (1989:5), Smith and Gifford (1966) established the types and varieties as unique to any given ceramic complex. At K'axob, the stratigraphy clearly shows the presence of types and varieties of different ceramic spheres within a specific deposit. The finding of cross-cutting types at K'axob diverges from the mainstream application of the type:variety system and makes the establishment of the K'axob Ceramic Complexes somewhat arbitrary.

The type:variety system also failed to make provision for cultural continuity in the manufacture of the ceramics (Forsyth 1989:5), as revealed now by new excavations. Consequently, I modified the common application of the type:variety system to include less fixed and rigid ceramic sequences. In Chapter IV, I report two ceramic spheres for certain types or varieties in the type:variety description format. Xe-Mamom, for example, means that the type was established for the Xe ceramic sphere and that the type continued to be present during the Mamom ceramic sphere. I appreciated this behavior while interpreting the presence or absence of a specific type or variety in each operation.

Originally, I prepared Tables 2.1 to 2.9 to express the total number of ceramics representing a type or variety in each construction phase, for every operation. The number represented includes rims and body sherds found for a particular type or variety. I could observe that the presence and absence of a type or variety, in any given stratigraphic layer or operation, defines an interval of time. With these tables, it is easy to compare how the frequency of a type or variety may increase or decrease in a particular construction phase, operation, and ceramic complex. For the next ceramic complex, the production of types and varieties may diminish, but, the ceramics continue to be present. Types or varieties may disappear within the original ceramic complex or within the next complex. The introduction of a new type or variety possibly contributes to the decline in use of older types or varieties.

The information provided by these tables proved to be invaluable for the establishment of the ceramic complexes (Table 2.1-2.9). The types and varieties found in the different construction phases support the establishment of the K'axob Ceramic Complexes, as the type:variety system indirectly functioned as a dating method. The ceramic sequence should be understood as a continuum. Following Ball (1977a:3), I view these complexes as ceramic assemblages with specific temporal, spatial, and cultural integrity. Types and varieties could be considered as artificial and arbitrary constructs that help in the interpretation of cultural patterns (Ball 1977a:3).

Table 2.1 Type:variety Analysis of the Chaakkax Ceramic Complex: Construction Phases of Operation I and Operation XII.

Counts of all Ceramics																
Ceramic Complex	Construction Phase	Chicago Orange: Chucun Variety	Guitara Incised: Guitata Variety	Joventud Red: Unspecified Variety	Joventud Red: Jolote Variety	Muxanal Red-on-Cream: Unspecified Variety	Abelino Red: Abelino Variety	Toribio Red-on-Cream: Toribio Variety	Chunhinta Black: Unspecified Variety	Tierra Mojada Resist: Tierra Mojada Variety	Desvario Chamfered: Unspecified Variety	Timax Incised: Timax Variety	Pital Cream: Pital Variety	Pital Cream: Red-slipped Unspecified Variety	Unnamed Resist Orange	**TOTAL**
Op. I	Phase III E-Area	176	10	133		13										332
Mamom Late Facet	Phase III-W Area	544	54	145		33										776
Mamom Early Facet	Phase II-E Area	1557	61	545	28	101	1	1	4	16			8	2		2324
	Phase II Stage c	1426	223	524	80	35	10	11	10	75		12	31	34	3	2474
	Phase II Stage b	100	1	33	1	1		1		4						141
	Phase II Stage a	436	11	67	3	1		4	3				7	7		539
	Phase II Stage a	53		3		2										58
	Phase II Stage a	1251	39	356	8	1	5	8	8	11			77	11		1775
	Phase I	2010	52	280	23	8	3	10		6			14	7		2413
Op. XII	Phase IV	13		1	11						1					26
	Phase III	235	1		16		4									256
		7801	**452**	**2087**	**170**	**195**	**23**	**35**	**25**	**112**	**1**	**12**	**137**	**61**	**3**	**11114**
		70.19%	**4.07%**	**18.78%**	**1.53%**	**1.75%**	**0.21%**	**0.31%**	**0.22%**	**1.01%**	**0.01%**	**0.11%**	**1.23%**	**0.55%**	**0.03%**	**100%**

Table 2.2 Type-variety Analysis of the K'atabche'kax Ceramic Complex: Construction Phases in Operation VII

Counts of all Ceramics																			
Ceramic Sphere	Construction Phase	Chicago Orange: Chucum Variety	Sapote Striated: Unspecified Variety	Flor Cream: Unspecified Variety	Laguna Verde Incised: Laguna Verde Variety	Monkey Falls Striated: Monkey Falls Variety	Monkey Falls Striated: Unspecified (Brown) Variety	Sierra Red: Sierra Variety	Sierra Red: Gadrooned Variety	Society Hall: Society Hall Variety	Hillbank Red: Hillbank Variety	Union Appliqué: Unspecified Variety	Polvero Black: Unspecified Variety	Unnamed Orange-on-Cream	Unnamed Red-on-Orange	Aguacate Orange: Aguacate Variety	Otacamallo Red-on-Orange: Otacamallo Variety	Ixcanrio Orange Polychrome Ixcanrio Variety	TOTAL
Early Classic	Surface	8	4			29		8	1	6	1								59
	III		5	2		41		60	1		6						2		117
		101	63	6		340	3	114	6	91	17					4	6		751
		63	51			199		89	1	46	5					6		4	464
		69	27			225	2	110		61	6					7	2	2	511
		7	6	1		41	1	28		30	7			1				3	125
		11	13			124		122	1		1							3	275
		2	3	2		39		19			6				1	2		4	78
Floral Park	II	17				5		6		2	51							1	82
		2	13	2		36		16		11	10	1							91
		1				1		2		1									5
		23	1			4	1			6	6								41
		103	6	2	1	30	1	79		129	1		1					2	355
Chicanel	I	16		1		15		41	1	29									103
		7	17	1		48	1	31	1	17	26								149
TOTAL		**430**	**209**	**17**	**1**	**1177**	**9**	**725**	**12**	**429**	**143**	**1**	**1**	**1**	**1**	**19**	**10**	**19**	**3204**
		13.42%	**6.52%**	**0.53%**	**0.03%**	**36.74%**	**0.28%**	**22.63%**	**0.37%**	**13.39%**	**4.46%**	**0.03%**	**0.03%**	**0.03%**	**0.03%**	**0.59%**	**0.31%**	**.59%**	**100%**

Table 2.3 Type-variety Analysis of the K'atabche'kax Ceramic Complex: Construction Phases of Operation I.

Counts of all Ceramics																		
Ceramic Phase	Construction Phase	Chicago Orange: Chucum Variety	Guitara Incised: Guitara Variety	Joventud Red: Unspecified Variety	Muxanal Red: Unspecified Variety	Sapote Striated: Unspecified Variety	Flor Cream: Unspecified Variety	Laguna Verde Incised: Grooved Variety	Monkey Falls Striated: Monkey Falls Variety	Sierra Red: Sierra Variety	Sierra Red: Unspecified Variety	Sierra Red: Gadrooned Variety	Society Hall: Society Hall Variety	Union Appliqué: Unspecified Variety	Repollo Impressed: Unspecified Variety	Unnamed Red-on-Orange	TOTAL
Chicanel Late Facet	Phase IX W Area	6							4	10			35			1	56
	Phase VIIIdE Area	69				3	3		14	119		2	39		1		250
	Phase VIII-cW Area	64				1			2	44		17	23				151
	Phase VIIIb-E Area Str. 1	25					1		1	58			7				92
	Phase VIIIaW Area	80					1		7	219		1	13				321
Chicanel Early Facet	Phase VII-W Area	1025	27	115	30			1	11	527	4		93	1			1834
	Phase VIb-E Area	265	2	27	4		1			105							404
	Phase VIb-E Area	134	2	39	2					47							224
	Phase VIaW Area	29		3						3							35
	Phase VIa-E Area	768	1	95	4		1			44							913
	Phase V-W Area	455	6	155	13					25							654
	Phase V-W Area	117	4	38	8					55							222
	Phase V-E Area	100	4	43													147
	Phase IV-W Area	180	4	95	2					43							324
	Phase IV-E Area	933	21	168	42												1164
	TOTAL	**4250**	**71**	**778**	**105**	**4**	**7**	**1**	**39**	**1299**	**4**	**20**	**210**	**1**	**1**	**1**	**6791**
	TOTAL%	**62.58%**	**1.05%**	**11.46%**	**1.55%**	**0.06%**	**0.10%**	**0.01%**	**0.57%**	**19.13%**	**0.06%**	**0.29%**	**3.09%**	**0.01%**	**0.01%**	**0.01%**	**100%**

Table 2.4 Type-variety Analysis of the K'atabche'kax Ceramic Complex: Construction Phases of Operation VIII.

Counts of all Ceramics														
Ceramic Phase	Construction Phase	Chicago Orange: Chucun Variety	Sapote Striated: Unspecified Variety	Laguna Verde Incised: Grooved Variety	Monkey Falls Striated: Monkey Falls Variety	Monkey Falls Striated: Unspecified (Brown) Variety	Sierra Red: Sierra Variety	Sierra Red: Gadrooned Variety	Society Hall: Society Hall Variety	Hillbank Red: Hillbank Variety	Ixcanrio Orange Polychrome: Ixcanrio Variety	Balanza Black: Unspecified Variety	Santa Teresa Incised: Santa Teresa Variety	TOTAL
Floral Park	Surface	2			3		3		6					14
	Surface	92	2		32		48		22	1	2		1	200
	Phase IIb	65	6	1	97	1	194		75	1	19	1	14	474
Chicanel	Phase IIa	4			8		122		11	1				146
	Phase Ia	72		1	1		135	5	2					216
	Paleosoil	23			3		22		10					58
Total		258	8	2	144	1	524	5	126	3	21	1	15	1108
Total %		29.29%	0.72%	0.18%	0.13%	0.09%	47.29%	0.45%	11.37%	0.27%	1.90%	0.09%	1.35%	100%

Table 2.5 Type-variety Analysis of the K'atabche'kax Ceramic Complex: Construction Phases of Operation X.

Counts of all Ceramics																		
Ceramic Phase	Construction Phase	Chicago Orange: Chucun Variety	Sapote Striated: Unspecified Variety	Flor Cream: Unspecified Variety	Laguna Verde Incised: Laguna Verde Variety	Monkey Falls Striated: Mokey Falls Variety	Monkey Falls Striated: Unspecified (Brown) Variety	Sierra Red: Sierra Variety	Sierra Red: Gadrooned Variety	Society Hall: Society Hall Variety	Society Hall: Impressed Variety	Hillbank Red: Hillbank Variety	Polvero Black: Unspecified Variety	Puletan Red-and-Unslipped: Puletan Variety	Unnamed Red-on-Orange	Aguacate Orange: Aguacate Variety	Guacamallo Red-on-Orange: Guacamallo Variety	Ixcanrio Orange Polychrome: Ixcanrio Variety	TOTAL
Floral Parl	Phase IX	53	2	1	1	139	1	77		41									315
	Phase VII	65	99	4		614	7	157		56						3	2	3	1010
	Phase VI	116	5			36		62				3					2	2	226
Late Chicanel	Phase V	42	1			66		440		104	1								654
	Phase IV	13	5			10		17		27								4	76
Early Chicanel	Phase III	70	2			91		150		17					3		1		334
	Phase II	65	10			67	2	166	2	65								2	379
	Phase Ib	21	2			6	1	14		5							1	3	53
	Phase 1	35				30		106					1					1	173
	TOTAL	480	126	5	1	1059	11	1189	2	315	1	3	1		3	3	6	15	3220
	TOTAL %	14.91%	3.91%	0.16%	0.03%	32.89%	0.34%	36.93%	0.06%	9.78%	0.03%	0.09%	0.03%		0.09%	0.09%	0.19%	0.47%	100%

Table 2.6 Type-variety Analysis of the K'atabche'kax Ceramic Complex: Construction Phases of Operation XI.

		Counts of all Ceramics																			
Ceramic Phase	Construction Phase	Chicago Orange: Chucun Variety	Black Rock Red: Black Rock Variety	Guitara Incised: Guitara Variety	Joventud Red: Unspecified Variety	Muxanal Red: Unspecified Variety	Lagartos Punctated: Lagartos Variety	Laguna Verde Incised: Laguna Verde Variety	Monkey Falls Striated: Monkey Falls Variety	Monkey Falls Striated: Unspecified (Brown) Variety	Sierra Red: Sierra Variety	Sierra Red: Gadrooned Variety	Society Hall: Society Hall Variety	Society Hall: Impressed Variety	Hillbank Red: Hillbank Variety	Puletan Red-and-Unslipped: Puletan Variety	Union Appliqué: Unspecified Variety	Repollo Impressed: Unspecified Variety	Guacamallo Red-on-Orange: Guacamallo Variety	Ixcanrio Orange Polychrome: Ixcanrio Variety	TOTAL
Early Classic	Phase VIII	1							45		25										71
	Phase VIII	18			21				137		24		2				1				203
	Phase VII	145			36		1	1	135		499	3	18		22				1	1	862
Floral Park	Phase VI	217		3	64	1	1		216		268		13	1	203		1				988
	Phase V	316			24		9		32		82	2	33		33		3				534
Late Chicanel	Phase IVc	915		12	248	4			37	1	272	8	223	1	35		2	2			1760
	Phase IVb	29									3										32
	Phase IVa	17		2							3										22
	Phase III	845	12								88										945
	Phase II	978	13				1	5			102										1099
Early Chicanel	Phase Ib	605	21					1			106										733
	Phase Ia	345	10								20					1					376
	TOTAL	4431	56	17	393	5	12	7	602	1	1492	13	289	2	293	1	7	2	1	1	7625
	TOTAL %	58.11%	0.73%	0.22%	5.15%	0.07%	0.16%	0.09%	7.90%	0.01%	19.57%	0.17%	3.79%	0.03%	3.79%	0.01%	0.09%	0.03%	0.01%	0.01%	100%

Table 2.7 Type-variety Analysis of the K'atabche'kax Ceramic Complex: Construction Phases of Operation XII.

Counts of all Ceramics													
Ceramic Phase	Construction Phase	Chicago Orange: Chucun Variety	Guitara Incised: Guitara Variety	Joventud Red: Unspecified Variety	Joventud Red: Jolote Variety	Muxanal Red: Unspecified Variety	Abelino Red: Abelino Variety	Desvario Chamfered: Unspecified Variety	Sapote Striated: Unspecified Variety	Laguna Verde Incised: Laguna Verde Variety	Monkey Falls Striated: Monkey Falls Variety	Sierra Red: Sierra Variety	TOTAL
Floral Park	Phase II-Structure 1	38			6				14		95	19	172
	Phase I Structure 1	219			18								237
	Phase IV Structure 2	1029	2	6						3	10	57	1107
Late Chicanel		1458	6	47	56	4		1			2	114	1688
	Phase III Structure 3	1219	8	19	50	1	4						1301
	Phase II Structure4	534										57	591
Early Chicanel	Phase I Structure 5	138				6							144
	TOTAL	4635	16	72	130	11	4	1	14	3	107	247	5240
	TOTAL%	88.45%	0.31%	1.37%	2.48%	0.21%	0.08%	0.2%	0.27%	0.06%	2.04%	4.71%	100%

Table 2.8 Type-variety Analysis of the K'atabche'kax Ceramic Complex: Construction Phases of Operation XIII.

Counts of all Ceramics								
Ceramic Sphere	Construction Phaase	Chicago Orange: Chucun Variety	Sapote Striated: Unspecified Variety	Laguna Verde Incised: Laguna Verde Variety	Monkey Falls Striated: Monkey Falls Variety	Sierra Red: Sierra Variety	Society Hall: Society Hall Variety	TOTAL
Floral Park	I				308	32		331
			17		238	37		292
		1	12		156	14		183
					80	4		84
		1		4	86		1	92
TOTAL		2	29	4	868	87	1	991
TOTAL%		0.20%	2.93%	0.40%	87.59%	8.78%	0.10%	100%

Table 2.9. Type-Variety Analysis of the Nohalkax Ceramic Complex: Construction Phases of Operations VII, VIII and XIII.

Counts of all Ceramics									
Ceramic Phase	Construction Phase	Structure	Aguila Orange	Balanza Black	Lucha Incised	Pita Incised	San Martin Brown	Santa Teresa Incised	TOTAL
Early Classic	III	98	3			2			5
			19						19
			13	6	1				20
			4	2					6
			4	2					6
			2	2		1			5
			68						68
			18			3			21
			550	1		1	1		553
			64				3		67
			1						1
	surface	102						1	1
				1				14	15
	surface	93	30			1			31
			12						12
	Stage Ib		74						74
	Stage Ia		67						67
			111						111
		TOTAL	**1040**	**14**	**1**	**8**	**4**	**15**	**1082**
			96.12%	**1.29%**	**0.09%**	**0.74%**	**0.37%**	**1.39%**	**100.00%**

The definition of the ceramic complexes represents both my analysis and that of Patricia McAnany. With the use of the Harris Matrixes elaborated for each operation, together with the type:variety frequency tables, we established the ceramic sequence for K'axob. Preliminary contextual analysis revealed that significant changes in the society, politics, and economics of K'axob were reflected in the ceramics. A Change in the ritual practice or even in the architecture, for example, was parallel to a change on pottery production. The ceramic response created a pattern that was characteristic of an interval in time, confirming the establishment of the ceramic complexes.

I established two Formative complexes, the Chaakkax and the K'atabche'kax Ceramic Complexes, based on the distribution of ceramics (Table 2.10). To establish the names of the ceramic complexes, I followed the same naming procedure I used for the Yaxchilan and Pomoná ceramics (López Varela 1989, 1994), as many of the geographical names for northern Belize are already used. I decided and agreed with Patricia A. McAnany to maintain the root word "K'ax" and add a suffix related to a distinguishable characteristic of the complex (Table 2.11). Patricia McAnany consulted Steve Houston for the accuracy of the names (Steve Houston personal communication to Patricia McAnany 1993).

Table 2.10 Names of the K'axob Ceramic Complexes.

Time Period	*Ceramic Sphere*	*Ceramic Complex*	*Name Description*	*Ceramic Facet*
Postclassic		**Kimilkax**	**Death of K'axob**	
Late Classic	Tepeu	**Witskax**	**Mountain Building**	
Early Classic:	Tzakol	**Nohalkax**	**Growth of K'axob**	
Protoclassic	Floral Park			Terminal K'atabche'kax
Late Formative	Chicanel	**K'atabche'kax**	**Cross Motif**	Late K'atabche'kax Early K'atabche'kax
Middle Formative	Mamom	**Chaakkax**	**Red K'axob**	Late Chaakkax Early Chaakkax

Each ceramic complex was divided into its correspondent facets. Shifts between types, stylistic changes, or the appearance of new minor types signaled a facet change. A facet, therefore, is the minor temporal subdivision of the ceramic complex. Terms such as Early, Middle, and Late are

used for the facets of the ceramic complexes (see Willey, Culbert, and Adams 1967:304). The ceramic complexes thus defined are as follows:

Table 2.11 The K'axob Ceramic Complexes.

Time Period	Subdivisions	Ceramic Sphere	Ceramic Complex	Facets
Early Classic	Early	**Tzakol**	**Nohalkax**	Early
Late Formative	Protoclassic	Floral Park	**K'atabche'kax**	Terminal
	Late	**Chicanel**		Late
	Early			Early
Middle Formative	Late	**Mamom**	**Chaakkax**	Late
				Early
	Early			

Dating of the ceramic complexes is based on relative stratigraphic sequences and radiocarbon data. The radiocarbon samples, however, date the various activities within an architectural phase rather than the ceramic complexes. Seven samples were sent for radiocarbon age determination and were divided into two sets (McAnany 1992). The first set consists of three radiocarbon age determinations (beta counting method) on charcoal from deposits excavated during 1981, calibrated according to Stuiver and Becker (McAnany 1992). The second set consists of four samples analyzed using the mass accelerator at Oxford, calibrated using the Van Der Plicht and Mook program (McAnany 1992). The accelerator method, however, consistently yielded more recent and more consistent dates than did the beta counting method (McAnany 1992). As a result, the information provided by the radiocarbon age determinations confirmed the Formative occupation span of K'axob, as previously suggested by the typological evidence. The dates proposed for the ceramic complexes are rounded-off approximations and will be discussed within the stratigraphic data of each ceramic complex in the following section (Table 2.12).

Table 2.12 Relation of Ceramic Complexes and Construction Phases of Structures at K'axob.

Temporal Distribution		Structures and Construction Phases						
Ceramic Spheres	The Ceramic Complexes	Operation I (Structure 18)	Operation XI (Structure 27)	Operation X (Structures 32, 33, 34, 35, and 94)	Operation XII (Structure 28)	Operation VIII (Structure 108)	Operation VII (Structure 98)	Operation XIII (Structure 93)
			VIII		VII			
Tzakol	The Nohalkax Complex	X	VII	VII	VI		III	I
Floral Park	K'atabche'kax Terminal Facet	IX	VI	VI	V	IIb	II	
The Chicanel Sphere	K'atabche'kax Late Facet	VIIId	V	Vb	IV	IIa	I	
		VIIIc	IVc	Va	III			
		VIIIb	IVb	IV	II	Ib		
		VIIIa	IVa	III	I	Ia		
	K'atabche'kax Early Facet	VII	III	II				
		VIb	III	I				
		VIa	II					
		V	Ib					
		IV	Ia					
The Mamom Sphere	The Chaakkax Late Facet	III						
	The Chaakkax Early Facet	I-II						

III.- DEFINITION OF THE K'AXOB CERAMIC SEQUENCE: THE STRATIGRAPHIC EVIDENCE

A. *The Establishment of the Chaakkax Ceramic Complex: Late Middle Formative or Mamom Period (800-400 B.C.)*

The excavations in front of Structure 18 (Operation I), situated within Group B, produced the best evidence for the K'axob Middle Formative sequence (Figure 2.1). Early Middle Formative ceramics were also found in Operation XII (Structure 28), albeit in what appears to be a secondary context. The inhabitants of K'axob probably used cultural debris from Middle Formative times to construct Structure 28, explaining the presence of such early ceramics. The careful excavation of Formative deposits, therefore, helped to define the Chaakkax Ceramic Complex.

The K'axob sequence begins during the Chaakkax Ceramic Complex, at the end of the Early Middle Formative. A radiocarbon sample (OxA-2721), obtained from Operation I, dated the paleosol occupation around 770-520 B.C. (McAnany 1992). The ceramics found in the paleosol (Operation I) belong to Xe-Real and Mamom ceramic traditions. This context includes the oldest ceramics found at K'axob, defining the beginning of the Chaakkax Ceramic Complex. I decided to create an Early Facet for the Mamom Ceramic Complex, rather than a late facet of the Xe Ceramic Complex, because most of the types correspond to the Mamom ceramic sphere. The presence of Xe and Real ceramic material, at the end of the Early Middle Formative, is a cross-cutting example where types and varieties used during an earlier ceramic sphere do not always disappear for a later one. Clearly, the decline of the Xe-Real ceramic material was a gradual process, rather than an abrupt one. Consequently, the Early Facet corresponds to a transitional stage between the Xe-Real and Mamom Ceramic Complexes, identified in Phase I and Phase II (Tables 2.12).

1.- Phase I and II of the Chaakkax Ceramic Complex: The Early Facet. During Phase I, the early inhabitants of Plaza Group B used the paleosol as the initial living surface (Bobo 1993). The numerous postholes, cut through paleosol, formed the remains of two perishable structures, which had among its features sherd-lined pits and patches of burned floor. Xe and Mamom ceramics were found on both structures. One of the structures presented a circular plan built on the surface of the paleosol (Bobo 1993). The inhabitants used a midden to discard their waste that included Xe, Real, and Mamom ceramics. The early K'axob dwellers revered their dead, as suggested by the interments of Burials 43 and Burial 46 (Bobo 1993). Phase I, was sealed by the floors of Structure 1 and Structure 4 of Phase II.

Phase II indicates a continuation of domestic activities such as preparing food, hunting, and fishing (Bobo 1993). The middens of Phase II present a wider range of Mamom types in comparison with Phase I; however, Xe ceramic material continued to be present. A floor sealed Phase II, the transitional stage between the Xe and Mamom ceramic sphere. Excavations in the next phase were characterized by the disappearance of Xe-Real ceramic types and by the total

dominance of Mamom types. Consequently, I decided to divide the Chaakkax Ceramic Complex into an Early and a Late Facet. The presence of the Xe-Real ceramic material supports the integrity of an Early Facet of the Chaakkax Ceramic Complex and its priority in time to the Late Facet.

2.- Phase III of the Chaakkax Ceramic Complex: The Late Facet. The Late Facet of the Chaakkax Ceramic Complex agrees with the Mamom Ceramic Sphere and with the disappearance of the Xe-Real ceramic types. Phase III indicates a continuation of domestic and burial activities from Phase II. The findings in Burial 30A, namely a Matamore Dichrome: Matamore Variety and Sierra Red: Sierra Variety vessels, anticipated the Chicanel traditions. A midden deposit, covering the eastern half of Structure 1 and the building of a plaza floor, sealed Phase II.

Following the Late Facet of the Chaakkax Ceramic Complex, there is a period in which Mamom ceramics and the consequent Chicanel types or varieties co-exist. At K'axob, the transition to the Late Formative period was also a gradual process. In northern Belize, this period has been referred to commonly as "Mamo-Chic". As a result, I defined this transition as the Early Facet of the K'atabche'kax Ceramic Complex.

B. *The Establishment of the K'atabche'kax Ceramic Complex: Late Formative or Chicanel Period (400 B.C.-A.D. 125)*

Operation I produced a series of deposits (Phases I-II) of which Xe and Mamom ceramics were the lowest, followed by a level containing only Mamom ceramics (Phase III). The next construction phases, Phases IV-VII, contained Mamom and Chicanel ceramics. The occurrence of Chicanel types in Phase IV separated the Chaakkax ceramic complex from K'atabche'kax times. Phases IV-VII, therefore, correspond to this transitional stage, the Early Facet of the K'atabche'kax Ceramic Complex or the "Mamo-Chic" period.

The beginning of the K'atabche'kax Ceramic Complex could be dated around 400 B.C., based on the end of the Chaakkax Ceramic Complex. A similar transitional stage between Mamom and

Chicanel times was dated with 14 radiocarbon samples spanning 520-305 B.C. at Cuello (Hammond, Gerhardt and Donaghey 1991:41). The approximate date of 400 B.C., therefore, seems correct for the beginning of the K'atabche'kax Ceramic Complex. The end of the Early Facet is not clearly dated at K'axob. At Cuello, however, the end of this period is suggested around 305 B.C. (Hammond, Gerhardt and Donaghey 1991:41).

1.- The Early Facet of the K'atabche'kax Ceramic Complex: the Transition to Chicanel (400-? B.C.).

The Early Facet of the K'atabche'kax Ceramic Complex begins with the construction of the plaza floor in Operation I (Jackson 1992). Phase IV can be considered as a transition to the Chicanel ceramic sphere, because the Sierra Red ware is fully introduced and is coexisting with Mamom types, such as Joventud Red. During this phase, the midden deposit and the sherd-lined pits contained Mamom and Chicanel ceramics. Phase IV was covered by a single unit of construction fill. In Phase V, the contents of middens and sherd lined pits suggest a continuation of domestic activities, as they are very similar to the ones found for Phase IV. This transitional period in the history of K'axob is reflected in the burial practice. During Chaakkax times, K'axob inhabitants buried a single individual in a pit. From Phase V onwards, multiple burials become a common practice. A plaster floor deposit sealed Phase V, corroborating the establishment of the Early Facet.

Operation XI (Structure 27) also defined the Early Facet of the K'atabche'kax Ceramic complex. The first construction phase (Phase Ia-Operation XI) corresponds to Phase IV in Operation I (Table 2.13). The excavated remains consist of a partially preserved floor, several postholes, fragments of a wall, a midden, two interments designated as Burials 10 and 12, and three sherd-lined pits (McCormack 1994). The ceramics found correspond to Mamom and Chicanel types. A *sascab* floor from Phase Ib sealed Phase Ia that is contemporaneous with Phase V-Operation I (Table 2.13).

Operation X supports the temporal placement of the Early Facet of the K'atabche'kax Ceramic Complex (Henderson 1992). The excavations revealed that the dwellers modified the bedrock

Table 2.13 The K'atabche'kax Ceramic Complex and its Construction Phase.

Temporal Distribution		Structures and Construction Phases						
Ceramic Sphere	The Complexes	Operation I	Operation XI	Operation X	Operation XII	Operation VIII	Operation VII	Operation XIII
The Chicanel Sphere	K'atabche'kax Terminal Facet	IX	VI	VI	V	IIb	II	I
	K'atabche'kax Late Facet	VIIId	V	Vb	IV	IIa	I	
		VIIIc	IVc	Va	III			
		VIIIb	IVb	IV	II	Ib		
		VIIIa	IVa	III	I	Ia		
	K'atabche'kax Early Facet	VII	III	II				
		VIb	III	I				
		VIa	II					
		V	Ib					
		IV	Ia					

surface by digging features into bedrock or by constructing features that bridged uneven surfaces (Henderson 1992). Evidence of postholes, dug into bedrock, suggests the presence of perishable material structures. The beginning of such construction activity (Phase I) occurred, approximately, during Phase VIb-Operation I (Table 2.13). This seems to be a period of stability in the K'axob community because the inhabitants used Mamom and Chicanel ceramics and maintained subsistence and domestic activities. A floor, to build an apsidal shaped structure, sealed Phase I.

The next construction phases in Operation I (Phase VI-VII), X (Phase II), and XI (Phase III) are characterized by an emphasis on household activities and burial practices. The interment of the individuals in Burials 7 and 8 sealed Phase II in Operation XI (McCormack 1994). In Operation I, a good number of burials were found in the fill deposit of Phase VIb. Operations X and I revealed a weak presence of striated wares. Interestingly, the next construction phases in these Operations had a total absence of Mamom ceramics and a significant presence of striated wares. I decided to create a Late facet for the K'atabche'kax Ceramic Complex, based on these findings.

2. The Late Facet of the K'atabche'kax Ceramic Complex: the Late Formative or the Chicanel Ceramic Sphere. Excavations at Operation I, Operation VIII, Operation X, and Operation XI provided evidence of Chicanel ceramics. The absence of Middle Formative ceramics separated the Early Facet from the Late Facet. The Late Formative is a period of major construction at K'axob and at nearby sites. At Cuello, for example, there is a transformation of all buildings around the north, west, and south sides of the patio, as well as the creation of Structures 314 and 315d, two substantial rectangular platforms supporting the first stone-walled superstructures known at Cuello (Hammond, Gerhardt and Donaghey 1991:41). The K'axob inhabitants began the construction of the Late Facet structures of (Operation VII and Operation XII). The excavations at these structures indicate the presence of Chicanel ceramics. Type:variety analysis suggests, clearly, a widespread use of striated wares within this phase, justifying the beginning of a new facet, the Late Facet of the K'atabche'kax Ceramic Complex. The excavations, moreover, confirm the absence, for example, of Society Hall: Society Hall Variety in the Early Facet. Several events at K'axob establish the subdivision of the K'atabche'kax Ceramic Complex into four stages.

a.- The First Stage of the Late Facet of the K'atabche'kax Ceramic Complex. The beginning of the Late Facet of the K'atabche'kax Ceramic Complex or the Chicanel ceramic sphere associated with several phenomena at K'axob. Widespread construction activity and the appearance of striated wares outline this first stage. This stage marks the construction of the first Late Facet structure at Operation XI. In Operation I, Structure I was enlarged and reinforced with the construction of a multi-course limestone retaining wall (Jackson 1992). The building of retaining walls seems a generalized activity. Excavations in Operation XI exposed the construction of a building platform with a retaining wall (McCormack 1994). Operation X revealed the building of a new patio surface with a raised circular structure. The building presented a curving retaining wall, formed by three courses of smoothed, round, river cobbles (Henderson 1992). Operation VIII yielded also information about the construction of a three-course retaining wall, several pits, a midden, and the interment of individuals (McCormack 1992). The next construction phases established a change in the ritual activity. Evidence provided by Operation I, X, XI and XII suggests that the K'axob inhabitants began to disarticulate the deceased for interment.

b.- The Second Stage of the Late Facet of the K'atabche'kax Ceramic Complex. Operation I (Phase VIII) yielded a series of deposits, characterized by the presence of disarticulated burials, as it is the case of Burial 4, located in a large spade-shaped cut. In Operation XI-Phase IV, the raised platform contained several disarticulated burial deposits (McCormack 1994). Operation X revealed evidence of ritual activity during construction Phase IV. The inhabitants of this group interred a cache into the patio and then buried this level with the construction of another patio surface. Notably in the next construction phases, architectural use of space changed for ritualistic purposes.

c.- The Third Stage of the Late Facet of the K'atabche'kax Ceramic Complex. According to Jackson (1992), the Late K'atabche'kax plaza floor of Phase VIIIc in Operation I was used for purposes that were much different from the earlier Chaakkax Ceramic Complex. The use of space favored ritual activity with the placement of a cache consisting of four vessels in a marl-lined pit (Jackson 1992). The reorientation of architectural space at most structures occurred slightly later in time. Apparently, the inhabitants designated the space of their main plaza as sacred and then reoriented architectural space at other structures. Besides, the building of Structure 98 (Operation VII) with architectural innovations separated another stage.

d.- The Fourth Stage of the Late Facet of the K'atabche'kax Ceramic Complex. New construction techniques characterize this last stage of the Late Facet. Phase IV of Operation XII is of particular interest because the construction of Structure 2 provides an important example of varied residential construction techniques (Henderson 1994). Similar to earlier construction phases, the residents incorporated an earthen foundation from adjacent ground surface and midden remains to construct an elevated surface for Structure 2. The midden used to built this structure contained Middle Formative ceramics. Quite possibly, the inhabitants dismantled other structures for their new buildings. Placing of caches became a common practice at most structures. In Operation XI, ritual and domestic utilitarian related features include a vessel cache, a sherd-lined pit, a cache pit, a lip-to-lip cache, and the interment of the individual in Burial 36 (McCormack 1994). In Operation VIII-Phase IIa, for example, a burial pit and one cache intruded into the floor.

Regarding ceramics, Protoclassic modes occurred at the end of the Late Facet, signaling the beginning of new ceramic traditions. Archaeological evidence indicates that Floral Park ceramics are an addition to the Late K'atabche'kax inventory. I decided to present the ceramics from this period as a Terminal Facet of the K'atabche'kax Ceramic Complex, rather than a subcomplex, because Floral Park ceramic material coexists with Chicanel types and varieties.

C. *The Terminal Facet of The K'atabche'kax Complex (?-A.D. 125): The Protoclassic Period*

The Terminal Facet of the K'atabche'kax Ceramic Complex represents the end of the Formative period. The definition of the Protoclassic period is still not very clear. At K'axob, Protoclassic ceramics are an addition to the Late Formative, marking the transition to the Early Classic. Terminal Facet ceramics occurred in Operation I, Operation VII, Operation VIII, Operation X, Operation XI (Structure 27), Operation XII, and Operation XIII. Most of the Protoclassic material relates to ritual contexts at K'axob; however, the ceramics occur also in middens, or pits. The same pattern occurs at Kichpanha (Meskill 1992) and in the Stann Creek District (Graham 1994:37), where Protoclassic sherds were recovered from midden deposits. Protoclassic ceramics, therefore, do not occur alone.

Several changes relate to the Terminal Facet, as a continuation of previously established Late Facet patterns. The spatial organization of domestic architecture, for example, changed in Operation XII (Henderson 1994). The new structure resembles a *plazuela* group, composed of inward looking residential structures that form a ring on top of a raised platform. The features associated with the habitual use of Structure 1 differ in their location (Henderson 1994). Disposal areas changed from an east-west axis to a north-south orientation. Excavations documented four pits, two post holes located in the center of Structure 1, and three extended burials (Henderson 1994). On the western side of Structure 1, residents constructed a sunken hearth in the middle of the plaster floor. Until the Late Facet of the K'atabche'kax Ceramic Complex, residential architecture received a north-south orientation. This pattern changed for the Terminal Facet as residential architecture presents an east-west orientation. With this change, the residential

architecture begins to appear as it does on the current ground surface at K'axob (Henderson 1994).

During the Terminal Facet, the construction activity at Operation VIII ceased after Phase IIb (Table 2.13). Cultural material recovered from the ground surface of this structure includes sherds from the Late Chicanel to the Early Classic. The primary construction unit is a poorly preserved sascab floor with an intrusive pit, containing fragments of Chicanel and Floral Park ceramic types. In contrast to Operation VIII, residents of Structures 32-35 and 94 constructed another patio surface and at the end of Phase VI (Table 2.13). In Operation I, a pit contained the interment of various individuals (Burial 2). Burial 2 was associated with the ceremonial use of the plaza floor. This burial of the Terminal K'atabche'kax Facet intruded into early Mamom levels (White 1990).

Ritual activity of the Terminal Facet relates to final depositional burials or caches. Ceramics associated with Burial 1 and 2 in Operation XI, correspond with Formative and Early Classic ceramic traditions, showing that the Terminal Facet does not come to an abrupt end. Protoclassic and Chicanel ceramics continued to be used during the Early Classic at K'axob. I realized, therefore, that it was necessary to include the ceramics of the Early Classic period to have a broader appreciation of the end of the Formative period. Certainly, the new excavations at K'axob will broaden our knowledge of this transitional stage to the Early Classic.

D.- *The Establishment of the Nohalkax Ceramic Complex: The Early Classic Complex or Tzakol 1 (A.D. 125-?)*

The Nohalkax Ceramic Complex is well represented at K'axob. Early Classic ceramics were concentrated above the uppermost floors of Formative house-mound excavations (Table 2.13). Architectural changes support the beginning of the Early Classic. At Structure 98, architectural space changed as residents constructed a low pyramid-like mound with compact marl. The K'axob inhabitants built another structures, Structure 93 (Operation XIII), with new construction techniques (Martonova 1992).

The Nohalkax pottery has a restricted density and distribution because results of the 1995 field season are not included in this sample. The 1995 field season yielded more ceramic information on the Early Classic deposits that undoubtedly will refine the analysis of the Early Facet of the Nohalkax Ceramic Complex (Table 2.13). However, the continuation of Formative ceramics into Early Classic times made it important to include these ceramics in this preliminary analysis.

The Nohalkax Ceramic Complex at K'axob is marked by dramatic changes in the ceramic assemblage. The Nohalkax Ceramic Complex sees the replacement of the waxy monochrome slipping by a gloss ware tradition. There is a development and proliferation of polychrome pottery and the continuation of striated unslipped types. The dominant red color disappears in favor of an orange base slip. The "z" angle becomes a common mode of Nohalkax times. Vessels are now decorated with gouged incisions or with a carved technique. Ring bases are abundant in the dish forms. In this regard, the Nohalkax ceramics are part of the Tzakol Ceramic Sphere.

The K'axob archeological evidence displays changes in the burial practices because more elaborate grave pits and goods are associated with the interments. Burials of the Nohalkax Ceramic Complex were placed in a cyst, a practice that had begun in the Terminal Facet of the K'atabche'kax Ceramic Complex. Apparently, residents form different structures reopened earlier burials to place new interments. In Operation XII, the interment of two individuals (Burials 2 and 4), for example, disturbed the remains of two earlier interred persons (Burials 7 and 8). In Operation I, the residents reopened a pit and interred up to five people in the same grave. The introduced changes, therefore, support the establishment of the Nohalkax Ceramic Complex.

IV.- DEFINITION OF THE K'AXOB CERAMIC SEQUENCE: THE RITUAL EVIDENCE

The archaeological and stratigraphic data, together with the available radiocarbon dates, support the chronology placement of the K'axob ceramic sequence. The excavations at K'axob provide reasonable evidence of ritual practices that changed through time. Ritual practice involved the use of pottery that helped to separate and establish the K'axob ceramic sequence.

A. *The Chaakkax Ceramic Complex*

From these early times, it is possible to detect ritual activity and social status differentiation among the inhabitants of K'axob. Burials excavated in Operation I include children and male adults. The burials, however, differ in their contents, indicating a differential social status for each interred individual. The probable child of Burial 39, lying on its right side and in a slightly flexed position, had only a few sherds from Chicago Orange: Chucun Variety, Joventud Red: Unspecified Variety and Guitara Incised: Guitara Variety. The individual in Burial 37, in a primary and extended left side position, had a whole marine shell near the heart, and a bead near the hand. In contrast, the individuals in Burial 46 and Burial 42 were interred without any offering.

For the Maya Lowlands, El Salvador and the Guatemala Highlands were influential centers of ceramic development since Middle Formative times. Contacts with these areas and northern Belize exist also since the Early Facet. Evidence of these contacts occurs in Burial 43. The interred individual, placed in a primary extended supine position with the legs crossed at the feet (Bobo 1993), had an inverted Timax Incised: Timax Variety vessel on the east side of the skull (Figure 2.2). On its west side, a Toribio Red-on-Cream: Toribio Variety vessel was placed as part of the interment (Figure 2.2). K'axob is not the only site in northern Belize participating in this network, as Tierra Mojada is also present at Colha (Valdez 1987).

The archaeological evidence from K'axob suggests that the Late Facet of the Chaakkax Ceramic Complex is a period of economic stability at the site. The interments of individuals, for example, follow the same patterns as in the previous Early Facet. The individuals continued to be placed in an extended position. Burial 28 (Operation I), for example, was an individual interred in a primary and right side extended position (Jackson 1992). The arms of the individual were slightly flexed and its legs were crossed at the knees. The skull of the individual faced to the southeast and had a small bivalve shell near the cranium, but no whole vessels (Jackson 1992). The poorly preserved remains of an interred individual (Burial 30), however, had two complete vessels that

were part of the offering (Figure 2.2), a Matamore Dichrome: Matamore Variety bowl with incurved sides and a Sierra Red: Sierra Variety bowl with flared sides (Jackson 1992). The presence of a Sierra Red bowl in a burial and its absence in secondary deposits indicates the introduction of this ware to the site of K'axob.

B. *The K'atabche'kax Ceramic Complex*

1. The Early Facet of the K'atabche'kax Ceramic Complex. K'axob experiences a series of changes during this period, leading to a more complex form of organization. During the Early Facet of the K'atabche'kax Ceramic Complex, ritual practice changed, as multiple burials become a common practice. In Operation I, Burials 31 and 34 are overlapping skeletons found in a simple subrectangular grave (Jackson 1992). In Operation I-Phase VI, two individuals (Burials 25 and 29) were buried in a simple subrectangular pit. Near the right shoulder, Burial 29 had a shell and fragments of a Sierra Red: Sierra Variety bowl (Jackson 1992). Burial 25 was interred with a fragment of a Sierra Red: Sierra Variety bowl near the skull (Jackson 1992). In Structure 18-Phase IV, Sierra Red: Sierra Variety does not appear as part of the discarded material. Sierra Red: Sierra Variety was part of an interment in Zone 113 (see Figure 2). The individual in Burial 24 had over the head and the shoulder area a broken Sierra Red: Sierra Variety upright bowl with incurved-recurved sides (Figure 2.2). Another innovation in the burial practice is the interment of female individuals. A female adult interred in Structure 27 (Burial 12) was placed in an extended position with the head looking upward. The burial had a partially complete Sierra Red: Sierra Variety bowl as part of the offering.

During Chaakkax times, children lacked complete vessels as part of the offering; however, this practice changed during the Early Facet of the K'atabche'kax Ceramic Complex. A single child of unknown sex gender (Burial 27-Operation I), placed in a primary and supine extended position, had a partially complete Sierra Red: Sierra Variety bowl, positioned over the pelvis (Jackson 1992). Fragments of a tecomate bowl were recovered from near the right shoulder (Jackson 1992). In contrast, the child identified as Burial 32 was placed in the same position as Burial 27. Nevertheless, the child was not interred with any vessels. Near the head, the child had a rounded

ground stone and three *Pomacea* snails (Jackson 1992). In contrast, the remains of a child (Structure 27-Burial 11) did not have any offering; however, the child was placed in a seated position with the head looking downward (McCormack 1994).

Single male burials, characteristic of the Chaakkax times, continued to be interred at K'axob. In Operation I, a single adult individual (Burial 34), placed in a supine position with slightly flexed legs, had a partially complete Sierra Red: Sierra Variety bowl over the head area (Jackson 1992). The individual in Burial 19 (Operation I) had a Sierra Red: Sierra Variety bowl, inverted over the skull (Figure 2.2). Shell beads, adhered to the inside of this bowl, could be part of some kind of head decoration (Jackson 1992). Two more vessels were associated with this burial, a Sierra Red: Sierra Variety jar and bowl. The Sierra Red: Sierra Variety bowl served as a lid for the spouted jar.

2. The Late Facet of the K'atabche'kax Ceramic Complex. The stratigraphic evidence at K'axob indicates that the placement of burials or caches during the Late Facet of the K'atabche'kax Ceramic Complex reflects major changes in the life of K'axob. It has been suggested that most caches were associated with calendric ritual plays, or with agricultural metaphors of cyclic death and rebirth that would have had profound meaning for people living in agricultural places such as K'axob (Masson 1993).

a.- The First Stage of the Late Facet of the K'atabche'kax Ceramic Complex. At the beginning of the Late Facet, most burials were placed in an extended position. The interment of an adult and a child, however, are characteristic of this stage. This practice, moreover, will continue into the Classic period at K'axob. In Operation XI-Phase IV, Burial 7 is an adult individual, accompanied by a child (Burial 8), tentatively aged among 5-10 years old. Both individuals were placed in a seated position. The adult faced east and the child west. Since these burials were located partially in the construction fill of the succeeding period they demarcate the final activities of construction phase III and the initial activities of construction Phase IV in Structure 27 (McCormack 1994).

Single burials continued to be interred in Operation I. Burial 23 was an individual, placed in a supine extended position, resting on the left humurus (Jackson 1992). A Sierra Red: Sierra Red Variety bowl and a cache of 96 burned *Pomacea* snails were collected from the area around the lower-leg of the skeleton (Figure 2.2). The placement of caches, clearly, begins during this first stage. Two burials and one cache were placed on top of paleosol, in Operation VIII (McCormack 1992). The position of the burials reflects the complexity of ritual practice. In Operation VIII, an individual (Burial 2), lying in an extended position with an east-west azimuth, had its left foot securely placed between two stones within the retaining wall (McCormack 1992). This first stage is characterized also by the placement of caches in the burials. A cache of three Sierra Red: Sierra Red Variety vessels was placed near the skull of Burial 2 (Figure 2.2).

b. The Second Stage of the Late Facet of the K'atabche'kax Ceramic Complex. The second stage of the Late K'atabche'kax is characterized by disarticulated burials, by the appearance of lip-to-lip caches, and by the placement of burials to seal a construction phase. Earlier burial patterns continue into this second stage; for example, an adult and a child are interred in Operation I-Phase VIIIb. The remains of an adult in a supine extended position and a 2-3 year old child had a Sierra Red: Sierra Red Variety bowl, inverted over the adult skull, and another over the adult's left shoulder (Jackson 1992). A single child interment was placed in Operation I, in a small subrectangular pit. The skeletal remains corresponded to an 18 month old child (Burial 15), in a supine extended position. The child's legs were flexed slightly, giving a "bowlegged" appearance. Near the head, there was a flat stone, looking like a headrest. A Sierra Red: Sierra Variety bowl was found between the child's bowed legs (Figure 2.2), containing a stone and unidentified bone fragments. A shell figurine pendant, together with shell beads, was located west of the vessel.

Evidence of disarticulated burials occurs in Operation I-Phase-VIIIb, as it is the case of Burial 4, located in a large spade-shaped cut. The skull of the individual did not articulate with the body. A Sierra Red: Sierra Variety bowl was positioned above the skeleton (Figure 2.2). A second individual (Burial 2), however, was articulated and placed in a supine flexed position. A dish with outcurved sides was found over the skull, at a slightly lower level than the rest of the skeleton. A second flared side bowl was placed beside the body in the area of the *Pomacea* snails

(Jackson 1992). A skull, a macroblade and over 100 *Pomacea* snails and fresh water bivalves were placed in a shallow Sierra Red: Sierra Red Variety dish, directly on top of an extended burial of Operation XII-Phase II (Henderson 1994).

Placing burials to seal a construction phase was a common practice for this stage. In Operation XI-Phase IVb, the individual in Burial 6 was placed in a seated position, facing north. A portion of the skeletal remains was located above the floor, marking a final construction event. Behind the head of the individual, a shallow dish covered the head and a second vessel was placed upright at the individual's feet (Figure 2.2). A bone needle was also recovered near the left hand of this individual (McCormack 1994). In Operation VIII-Phase Ib, a final burial deposit (Burial 1) contained two inverted pots with the skull and the long bones of one individual. A Society Hall: Society Hall Variety bowl was inverted over the skull and a Sierra Red: Sierra Red Variety dish was placed immediately to the east (McCormack 1992). The K'axob Sierra Red dish contained a skull, a macroblade, *Pomacea* snails and freshwater shells.

Lip-to-lip caches are also very common in the ceremonialism of this second stage. Sierra Red and Society Hall vessels were used to form lip-to-lip caches at K'axob (Figure 2.2). During this second stage, Society Hall: Society Hall Variety becomes a common vessel in ritual practices. At Cuello, all pottery vessels included in cache offerings are of the Cocos Chicanel ceramic complex with the majority belonging to Sierra Red: Sierra Variety and Society Hall Red: Society Hall Variety (Hammond and Gerhardt 1991:225). The earliest caches associated with Plaza Floor III at Cuello consist of a lip-to-lip cache and a concentration of deer mandibles with a large tanged macroblade "dagger" (Hammond and Gerhardt 1991:226). In Operation X, a dedicatory lip-to-lip cache included an extremely eroded Sierra Red: Sierra Red Variety bowl and a Society Hall: Society Hall Variety bowl (Henderson 1992) Similar caches have been found at Lamanai (Pendergast 1971) and Chiapa de Corzo (Peterson 1963).

c. The Third Stage of the Late Facet of the K'atabche'kax Ceramic Complex. Disarticulated burials and the interment of multiple and individual burials continue into this third stage. In Operation I, the remains of one single individual, Burial 12, were contained in a sherd-lined pit. Near the

body of the individual were two jade beads and some bird bones were found near the skull. (Jackson 1992). The burial had a complete Sierra Red: Sierra Red Variety jar spouted vessel as part of its offerings (Figure 2.2). A disarticulated individual, Burial 3 (Operation I), was placed in a fetal position. The individual had two Sierra Red: Sierra Red Variety bowls (Figure 2.2), a stone tool, and a medium sized fish bone.

The burial of an adult and a child is still a practice at K'axob, as seen in Burial 14 (Operation I). The burial pit contained at least two individuals, an old very robust and well-preserved adult and a child less than two years old. The adult and probably male skeleton was lying in the pit, on its back, with its legs crossed, and the knees raised up perpendicular to the torso. The torso was oriented east-west. An inverted Sierra Red: Sierra Red Variety vase covered the skull of the adult individual. A very eroded Sierra Red: Sierra Red Variety bowl was located at the right side of the torso. A Chicago Orange bowl abutted the northern wall of the pit.

Most burials of this stage present a specific orientation. In Operation XII, a circular grave contained two seated individuals (Burials 13 and 14) and a secondary internment (Burial 15) of two femurs and a right tibia. Burial 13, placed on the western side of the pit, is an adult individual, covered by large sherds. A piece of chert was found under the cranium and near the mouth. Shell beads were loosely scattered in the soil matrix. Burial 14, a seated adult individual on the northern side of the burial pit, was covered by large Sierra Red: Sierra Red Variety sherds. The individual was seated with the legs closely against the torso and the arms wrapped around the legs. The right palm faced up and the head faced down. A concentration of shell fragments appeared near the eastern portion of the pit. A sherd bead and numerous shell fragments were recovered near Burial 15 (Henderson 1994).

A very interesting ritual offering was placed to mark the construction of the plaza, at Operation I. The cache consisted of four vessels arranged to form a cross when viewed from above (Jackson 1992). Besides, the vessels were placed in a cardinal spatial distribution (Jackson 1992). This is a very elaborate ritual because the vessels were specially made for this offering, as indicated by the standardization in weight, form and measurements of the participating vessels. Two Society Hall

flared-bowls were placed within the north-south axis. In this offering, the east and west vessels were two Sierra Red: Gadrooned Variety bowls (Figure 2.2).

Particularly notable of the K'atabche'kax period is the constant representation of a cross. A four-quadrant cross motif was represented on several Society Hall and Sierra Red ceramic vessels during this period. At K'axob, a bell-shaped pit contained the human remains of Burial 13 (Operation I). A single individual, Burial 13, lay on its right side, with its legs flexed, and arms crossed over the chest. The head was positioned upright, facing to the northeast, in the south end of the pit. A cache of *Pomacea* snails was found around the head of the individual. A Society Hall: Society Hall Variety bowl was inverted over the skull and it was ritually smashed (Figure 2.2). This particular vessel presents a streaky painted cross band on the external part of the base. The vessel was intentionally inverted, so the cross could lie upward. Together with this offering, a Sierra Red effigy spouted jar (Figure 2.2) was placed upright over the left half of the skeleton, resembling the boulder sculptures in the "potbelly style" found at Tonala in Chiapas, Kaminaljuyu, Palo Gordo, Monte Alto, Izapa, Chalchuapa, and El Salvador (Demarest 1986). In the Guatemala Highlands, these sculptures may be limited to the area in and around Kaminaljuyu, but numerically, there are more of the Monte Alto style sculptures at Kaminaljuyu than at the type site (Joesinck-Mandeville 1987:5). Potbellied sculptures portray fat, heavy shouldered figures with their arms clasping bloated bellies (Demarest, Switsur, and Berger 1982:565). Faces of both the full figures and heads have heavy flat noses, fat full cheeks, and thick lips (Demarest, Switsur, and Berger 1982:565).

d. The Fourth Stage of the Late K'atabche'kax Facet. Ritual activity continued to be an important aspect in the life of K'axob, as storage pits are reused for burial practices. In Operation XI, the internment of Burial 3 was placed in a storage pit. The individual was seated, but the cranium and spinal column were placed beneath the legs. A large inverted Sierra Red: Sierra Red Variety bowl was placed in the lap of the individual (McCormack 1994). Lip-to-lip caches continue to be present in this stage. In Operation XI, two Sierra Red: Sierra Red Variety vessels were used to form a lip-to-lip cache. In a dedicatory cache of Structure 102, a Sierra Red: Sierra Red Variety bowl served as a plate to a Sierra Red: Sierra Red Variety spouted jar (McCormack 1992).

Four burials and a lens of debris represent the final occupation activities of Operation XII. The individual in Burial 11, lying on its left side, was interred in a tightly flexed position, with the legs closely against the chest. A very eroded Sierra Red: Sierra Red Variety bowl was inverted and placed over the face. Chert, and whole freshwater bivalves were part of the offering (Henderson 1994). A seated individual (Burial 9), cross-legged, had a Sierra Red: Sierra Red Variety bowl placed on the lap. The torso and the head were bent, leaning over the bowl. The individual appeared to be resting on the forearms, which were placed above and slightly in front of the legs. Burial 10, interred 1.5 m south of Burial 9, was an individual in a seated position, with the head looking toward the east. The male was interred with a Sierra Red: Sierra Variety bowl and a duck effigy spouted vessel (Figure 2.2). A single seated individual, Burial 12, had a Sierra Red: Sierra Red Variety bowl, over the head. A jade bead, freshwater bivalves, *Pomacea* snails, lithic debitage, and sherds were recovered in the fill around the body (Henderson 1994).

Disarticulated burials occurred in Operation VIII (Phase Ib). The remains of an individual (Burial 6), deposited within a pit, were arranged in a bundle, with the long bones oriented east-west. The skull of this individual was placed on top of the long bones. In the same pit, Burial 5 was placed above Burial 6 in a praying position, facing to the west. Located at the hands of this male, of a relatively large physical stature, was a unique tetrapod vessel incised with a mat design, containing a jade bead. A large bead and an obsidian blade were placed within this individual's mouth. Burial 4, also a male, was placed on top of Burial 6 and arranged in a tightly flexed position facing west and looking south. Within this burial pit were two additional Aguacate Orange: Aguacate Variety vessels (McCormack 1992). The ceramic attributes of these vessels indicate the beginning of Protoclassic traditions.

3. The Terminal Facet of the K'atabche'kax Ceramic Complex. The Burials of the Terminal Facet are also of chronological interest because they contain a combination of vessels that fall into Chicanel-Protoclassic or into Protoclassic-Early Classic ceramic traditions. In Operation VII, a San Martin Brown: San Martin Variety bowl (Figure 2.2), for example, was found in a cache. The presence of this Early Classic type, in a Terminal Facet context, indicates an early occurrence and the emergence of Early Classic traditions. An associated cache contained two Sierra Red: Sierra Variety plates. The spatial distribution of the contents and the remarkable uniformity in location, however, contrast with the burials of the Late Facet of the K'atabche'kax and the Early Classic Ceramic Complexes.

In Operation XI, Burial 1, placed in an extended position, had a fragmented Sierra Red: Sierra Variety bowl on the chest, similar to a shield (McCormack 1994). A second burial, an adult male (Burial 2), was placed at the base of the same pit, in a semi-flexed position. Two large stones were next to either side of the skull, which was facing west. Three vessels were accompanying the individual, an Actuncan Orange Polychrome plate, an Aguila Orange: Aguila Variety jar, and a Yaloche Cream Polychrome: Unspecified Variety bowl. Culbert (1993) reported the occurrence of Aguila Orange, during the Cimi Ceramic Complex.

In Operation XII, residents interred three individuals (Burials 1, 3, and 6), off the southern edge of the structure. Definitely, these burials correspond to a final depositional event, as the individuals were placed over both the floor and the adjacent ground surface. The individuals were in a cyst, lying in an extended position, with an inverted bowl over the face. Burials 1, 3, and 6 differ entirely from earlier interments (Henderson 1994). Burial 1 contained the remains of a 50 year old woman, placed in an extended supine position (Saint Laurent 1992). An inverted Chicago Orange: Chucun Variety bowl covered the head of the individual (Henderson 1994). This phase was sealed by the construction of an Early Classic floor (Henderson 1994). The individual in Burial 6 lay in a supine position, in a partial stone cyst, under a slab stone that covered the head and the shoulders. Several sherds were placed over the shoulders of the individual. The teeth of this individual had been filed in a notched pattern (Henderson 1994). An Aguacate Orange: Aguacate Variety broken vessel covered the face of the individual (Figure 2.2).

Burial 3 was an adult in a supine position with the head facing west. An inverted Aguacate Orange: Aguacate Variety bowl was placed over the face and fragments of a Sierra Red: Sierra Variety dish appeared near the body of the individual (Henderson 1994). A cache found in this Burial contained six burnt limestone balls of various sizes. The cache resembles many of the offerings of Chiapa de Corzo (see Peterson 1963). The individual was interred with three small rocks, placed over the shoulders and the torso of the individual.

In Operation VIII, a dedicatory cache included fragments of an Aguacate Orange: Aguacate Variety bowl (McCormack 1992). Burial 3, a male individual, placed in an extended supine position, contained two areas of ritually killed vessels. On the eastern side of the pit, there were two partially complete Ixcanrio Orange-Polychrome: Ixcanrio Variety tetrapod bowls (McCormack 1992). The western portion consisted of two tetrapod Aguacate Orange: Aguacate Variety bowls (Figure 2.2).

One of the most interesting interments, Burial 18, of the Terminal Facet was found in Operation I. The inhabitants of K'axob excavated a pit, down to the Early Facet of the Chaakkax Ceramic Complex, to place this dedicatory burial. It is a multiple burial, associated with the ceremonial use of the plaza floor, with five complete vessels. The first vessel to be placed was a Society Hall: Society Hall Variety bowl with a painted cross on the bottom. On each side of the vessel, there are two small monkey-face applications.

The second vessel, a Society Hall: Society Hall Variety bowl, was surrounded by bone fragments. A large drilled shell pendant was found southwest of the vessel. Eighteen drilled tinklers and 17 sliced ones were excavated to the north. A burnt limestone slab was set over many long bone fragments. The next layer contained carved bone and a large cowry pendant, together with skull fragments. Hematite was sprinkled under the bones. The Society Hall: Society Hall Variety is decorated by three incised elements that resemble eyebrows or half moons. It has a painted band on the bottom of the vessel and the arms of the cross continue onto the walls (Figure 2.2). At the

crossing point, a circle was painted and it was outlined by four dots, forming a quadrangle. This symbol has been interpreted as a sky band symbol or the Kin sign.

A poorly preserved skeleton of a dog and a vessel was found in the last layer. Hematite was also found in this layer (White 1990). A white clay cap covered the burial deposit. This area is a deposit with inclusions of limestone, pebbles, many shell fragments, and Society Hall: Society Hall Variety fragments (White 1990). The deposit formed a low platform that effectively sealed the burial deposit. The second bell-shaped pit that intruded in the Plaza floor contained the remains of a possibly cremated skeleton, as suggested by disintegrating burnt human bone. The burial is associated with three Society Hall: Society Hall Variety vessels, one of these had a painted cross band on the base.

Several caches were also placed in Operation I. A cache consists of a Society Hall: Society Hall Variety bowl, placed on an east-west axis. Another cache contained three vessels, a Sierra Red: Sierra Variety bowl, plate, and a very eroded polychrome dish. Inside the bowl were 13 shells, two jade beads, two shell beads, one jade, three shell effigies, three comma-shaped pieces, two pieces of hematite, and three pieces of shell, that formed part of a mosaic (White 1990). Around the vessel cache were six burnt limestone balls of various sizes (White 1990).

During the Terminal Facet of the K'atabche'kax Ceramic Complex, types from the Late Facet and "Floral Park" ceramics coexisted with Aguila Orange: Aguila Variety and Actuncan Orange Polychrome: Actuncan Variety (Figure 2.2). The latter types were apparently restricted to the Early Classic period; however, Adams (1971) and Culbert (1993) reported an earlier presence of Aguila Orange at Altar de Sacrificios and Tikal. Actuncan Orange and Dos Arroyos polychromes are dated to Protoclassic and Tzakol 1 times, in the Stann Creek District (Graham 1994:204).

Throughout the Formative period, the K'axob ceramic sequence conforms to pottery development in the Maya area. The ceramics at K'axob tie with ceramic traditions found in the Belize Valley, the Peten, the Rio de la Pasion, the Guatemala Highlands, and the Southwestern Lowlands. There are regional and local interpretations of ceramic and cultural traditions that are

reproduced at the site. The archaeological record and the ceramics from K'axob, therefore, corroborate the participation of this dynamic area into Maya cultural development.

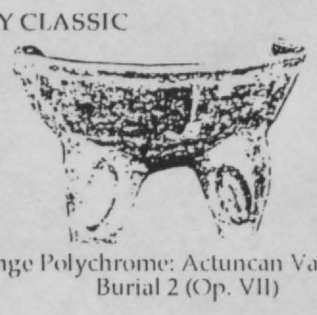
C.- *The Nohalkax Ceramic Complex*

The K'axob archaeological evidence displays changes in the burial practices, because more elaborate grave pits and goods were made for the interments. Burials of the Nohalkax Ceramic Complex were placed in a cyst, a practice that had begun in the Terminal Facet of the K'atabche'kax Ceramic Complex. Apparently, residents from different structures reopened earlier burials to place new interments. In Operation XII, the interment of two individuals (Burials 2 and 4) for example, disturbed the remains of two earlier interred persons (Burials 7 and 8). In Operation I, the residents reopened a pit and interred up to five people in the same grave. During Phase III of Structure 98, Burials 1 and 2 were interred in a subrectangular cyst. Burial 1 was covered by a rectangular stone. The content of the burial included four small bone fragments and four teeth of a child. Burial 2 had four large shaped stones. Two Actuncan Orange Polychrome: Actuncan Variety bowls were associated with this burial. One of the vessels was placed down over the head and the other was found at the height of the pelvis. The feet of this last vessel were painted and modeled as to form a peccary head (Figure 2.2).

In summary, stratigraphic evidence supports firm chronological data to link K'axob with other sites in northern Belize and the Maya Lowlands. Following the type:variety analysis, I discussed each ceramic complex regarding its stratigraphic evidence for its integrity and relative chronological placement. In the next chapter, I will describe the ceramic analysis to further discuss the characteristics of each ceramic complex and its correspondent facets.

THE NOHALKAX CERAMIC COMPLEX: THE EARLY CLASSIC

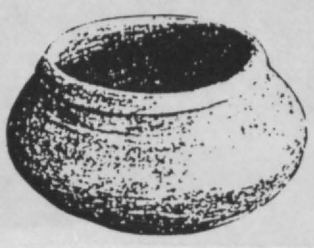
Actuncan Orange Polychrome: Actuncan Variety
Burial 4 (Op. XII)



Actuncan Orange Polychrome: Actuncan Variety
Burial 2 (Op. VII)

THE K'ATABCHE'KAX CERAMIC COMPLEX: THE LATE FORMATIVE

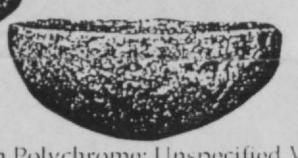
The Terminal Facet of the K'atabche'kax Ceramic Complex



San Martin Variegated Brown: San Martin Variety
Burial 3 (Op. VII)

Aguila Orange: Aguila Variety

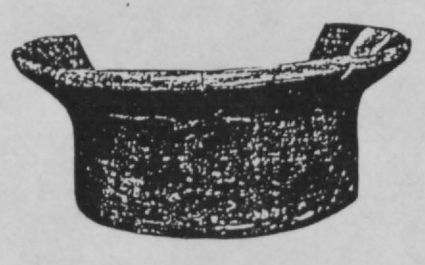
Burial 2 (Op. XII)



Yaloche Cream Polychrome: Unspecified Variety

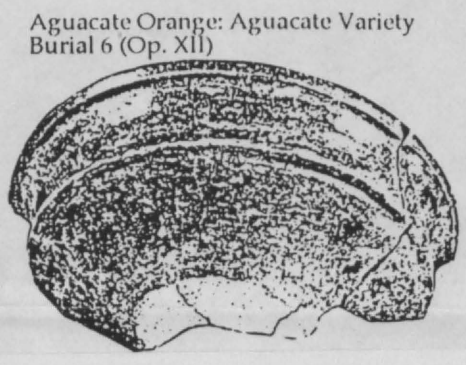
Aguacate Orange: Aguacate Variety
Burial 3 (Op. VIII)

Actuncan Orange Polychrome: Actuncan Variety



Society Hall: Society Hall Variety Vessels
Burial 18 (Op. I)

Aguacate Orange: Aguacate Variety
Burial 6 (Op. XII)

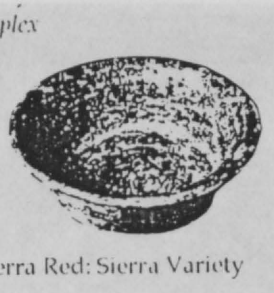


The Late Facet of the K'atabche'kax Ceramic Complex

Stage 4 of the Late Facet of the K'atabche'kax Ceramic Complex

Sierra Red: Unspecified Variety

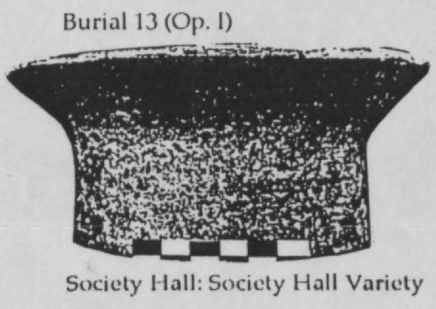
Burial 10 (Op. XII)



Sierra Red: Sierra Variety

Stage 3 of the Late Facet of the K'atabche'kax Ceramic Complex

Burial 13 (Op. I)



Society Hall: Society Hall Variety

Sierra Red: Sierra Variety

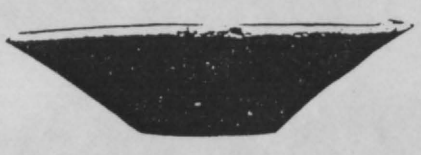
Sierra Red: Sierra Variety
Burial 12 (Op. I)

Sierra Red: Sierra Variety
Burial 3 (Op. I)

Sierra Red: Gadrooned Variety Vessels
Cache (Op. I)

Stage 2 of the Late Facet of the K'atabche'kax Ceramic Complex

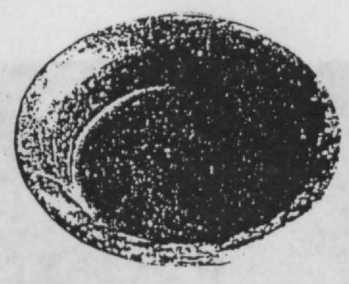
Sierra Red: Sierra Variety Vessels
Burial 15 (Op. I)



Sierra Red: Sierra Variety
Cache (Op. X)

Sierra Red: Sierra Variety
Cache (Op. VIII)

Sierra Red: Gadrooned Variety Vessels



Sierra Red: Sierra Variety
Burial 4 (Op. I)

Sierra Red: Sierra Variety Vessels
Burial 6 (Op. XI)

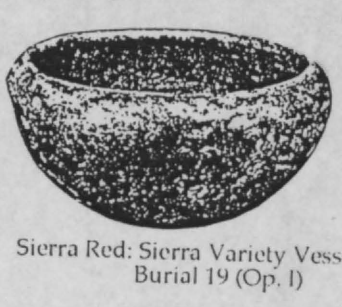
Stage 1 of the Late Facet of the K'atabche'kax Ceramic Complex

Sierra Red: Sierra Variety
Burial 23 (Op. I)

Sierra Red: Sierra Variety
Burial 2 (Op. VIII)

The Early Facet of the K'atabche'kax Ceramic Complex

Sierra Red: Sierra Variety
Burial 24 (Op. I)



Sierra Red: Sierra Variety Vessels
Burial 19 (Op. I)

THE CHAAKKAX CERAMIC COMPLEX: THE LATE MIDDLE FORMATIVE

Sierra Red: Sierra Variety

Burial 30 (Op. I).

Matamore Dichrome: Matamore Variety

The Late Facet of the Chaakkax Ceramic Complex

Burial 43 (Op. I)

Timax Incised: Timax Variety

Toribio Red-on-cream: Toribio Variety

The Early Facet of the Chaakkax Ceramic Complex

Figure 2. The Evolution of Ceramic Vessels at K'axob

THE K'AXOB CERAMIC ANALYSIS

Since 1990, Patricia McAnany has directed excavations at the site of K'axob; however, I began ceramic analysis during the 1992 field season of excavations. After the 1992 field season, ceramic research continued at Boston University during the fall of 1992, 1993, and 1994. During the fall of 1992, I revised the ceramic collection from the 1990 field season that comprises not only ceramic material from the Formative, but also the Classic and Postclassic periods. I agreed with Patricia A. McAnany to append the Formative ceramics from the 1990 field season in my research and analyze the Classic and Postclassic ceramics as part of the 1995 field season. The following investigation, therefore, includes the ceramics from three field seasons of excavations (1990, 1992, and 1993), in the Formative deposits of southern K'axob (Figure 2.1). In this chapter, I describe the procedure followed in analyzing the ceramic collection, comprising 53, 505 sherds and 93 complete vessels.[2]

I.- CERAMIC CLASSIFICATION PROCEDURE

The analysis in the field favored the control of the laboratory procedure, during the 1992 field season. In this regard, I had the opportunity to discuss the archaeological context of ceramics with the excavators. This exchange of information improved the interpretation of ceramics, helping the excavator to understand also a particular deposit. From the moment the ceramics entered the laboratory, I closely followed the handling of the ceramic material. The field laboratory received the ceramic material in plastic bags or boxes, tagged with provenience information. The valuable information provided by the excavator, furthermore, avoided the damaging process of washing

[2] The ceramic material is housed at the Department of Archaeology in Belmopan and the Archaeology Laboratory of Boston University. The number of complete or partially complete vessels has increased over the years, as many of the sherd fragments were glued together to define ceramic forms.

delicate ceramics. The ceramic material was carefully washed or sometimes just finely brushed when it had delicate slips. With this control, the laboratory helped to preserve the ceramics, but also, to retrieve residue material.

With the ordinary process of washing the ceramic material, I obtained valuable preliminary information about the characteristics of the ceramics such as its density or chemical composition. Although the sherds were dried outside the laboratory, the trays were placed in the shadow, to avoid further deterioration of the ceramics. Once the dried sherds entered the lab and were rebagged, they were ready for analysis and classification. In the case of complete vessels, some of them received a preliminary cleaning treatment until their arrival at the Archaeology Laboratory at Boston University.

A.- *The Type:variety Analysis*

The ceramic analysis considered the complete vessels, the rims, body sherds, bases, handles, and feet to be significant and diagnostic, even the 11, 949 sherds in the eroded category. For the purposes of the type:variety analysis, I studied and examined each sherd individually, to separate the eroded material and sherds that were smaller than a finger-nail. When there was a total absence of surface treatment and form information, I considered the material as eroded.

Afterwards, I sorted the ceramic material into ceramic units based on a combination of attributes that were inherent to each unit. At this stage, some of the ceramic units remained without any typological distinction, but others were starting to present recognizable homogeneity that was susceptible of being typed. In cases where the ceramic units did not support the creation of a variety or a type, because their representative sample was smaller than 25 sherds, I decided to describe the recognizable attributes and specify the materials as "unnamed". The term "unnamed" does not represent the name of the type. "Unnamed" indicates that the small sherd sample did not allow me to establish the ceramics as a type or a variety. The identified material slowly acquired a series of characteristics that formed a ceramic unit, a variety or type. The ceramics were counted and weighed by type or variety, for further analysis. Weight measurements were made with a

manual balance. The provenience data and the characteristics of the ceramic material, including counts and weight of the ceramic material, were registered in the computer, using an Excel and Word Program for the Macintosh (Table 3.1).

Table 3.1. A Sample of the Basic Recorded Information.

K'AXOB CERAMIC TYPE:VARIETY ANALYSIS-1993 FIELD SEASON

Ceramic Type: _____

Op.	Fs	Zone	Square	Context	No. Sherds	Weight	Form	Eroded
I	I-380	138	A	Floor	2	15.1	JR	E

Identified types or varieties were placed in bags and arranged by Operations. As a result, every individual context can be analyzed for further study. Ten or more sherds, including the most diagnostic ceramics, were photographed, drawn, and separated in a new bag, for further description. These sherds comprise the ceramic collection, stored at the Archaeology Laboratory of Boston University, for future consultation.

Review of ceramic collections at Belmopan provided physical identification of the ceramic units. Largely represented ceramics such as Chicago Orange, Sierra Red, or Society Hall were identified and easily separated with these ceramic collections. Complete vessels and the ceramic literature, moreover, confirmed the identification of a variety or type. Once all ceramic units were identified into types or varieties, I continued to describe the material according to the type:variety system. I verified the identification of the types when revising the ceramic collections from Barton Ramie, Altar de Sacrificios, Seibal, Copan, El Salvador, and the Guatemala Highlands, made available to me at the Peabody Museum in Harvard. Hammond provided, for examination, a sherd collection and some complete vessels found at Cuello, housed at the Archaeology Laboratory at Boston University. Francis Meskill supplied useful ceramic data from Kichpanha to establish the K'axob types and varieties. I compared type assignments with Fred Valdez and Kathryn Reese and

obtained valuable information to define the ceramics. Fred Valdez and Robert Fry suggested some revisions during a visit to the site and to the Archaeology Laboratory at Boston University.

II.- THE ADAPTATION OF THE TYPE:VARIETY SYSTEM TO K'AXOB CERAMICS

The classification procedure followed at K'axob agrees with the type:variety system. The excavations, however, revealed a new behavior for ceramic manufacture, contradicting some principles of the type:variety system. Recently, archaeologists have provided new information for the classification of ceramics that diverges from the original type:variety classification (Forsyth 1989). The excavations at K'axob are no exception and are certainly helping to expand the utility of this classificatory system. The excavations provided enough data to support ceramic continuity at K'axob where the manufacture and use of the types and varieties extend outside their original ceramic complex or sphere. Consequently, I modified the application of the type:variety system to facilitate my classification of the K'axob ceramics. The classification procedure followed at K'axob, if necessary, may be applied to other sites in the Maya area. I emphasize that the modifications are not the definitive approach to the system and should not be considered as such.

A.- The Divergence at K'axob from the Cuello Ceramic Classification

A significant problem at K'axob arouse from the limitation of drawing ceramic comparisons mainly with the site of Cuello. As I discussed in the introduction, the establishment of types and varieties at Cuello presents various problems, especially, after the adoption of a shortened chronology. The remaining chronological and typological problems, within the application of the type:variety system at Cuello, urged me to find a different approach to classify the ceramics from K'axob.

1.- Establishing a type or a variety at K'axob. The establishment of new types or varieties results in facilitating the retrieval of information on inter-regional contacts. Facilitating inter-site comparisons, certainly, is the responsibility of the ceramicist. Andrews V (1990:1) considered the lack of standardization in ceramic reports to blame for the difficulty in drawing definite

conclusions about the external relationships of a ceramic type of a specific complex. Dunnell (1971) suggests that the ceramic evidence used by Maya archaeologists to draw intra and inter-site comparisons is not satisfactory. I believe the problem originates in the type:variety system, as it opens the possibility of establishing a type or a variety based on one single attribute. Possibly, this is the result of the first attempt to apply the type:variety system (Forsyth 1989). Ceramicists (see Valdez 1987; Forsyth 1989; López Varela 1993), based on experience, seem to agree now that the creation of a type or variety, relying on one attribute, restrains inter and intra-site comparisons.

Consequently, I tried to avoid classifying sherds on one single attribute, for example, decoration or paste composition, unless strictly necessary. Although, the type:variety system indicates that paste composition is one of the many attributes needed to establish a type, I have found through my previous knowledge of ceramics that paste characteristics in the same type or variety could differ enormously. The same clay could vary in texture and composition from one vessel to another. There might even be cases, as in the Usumacinta (see López Varela 1989, 1994), in which two clay sources are used for the making of a specific type vessel. Choosing the paste as a single attribute to establish a type or a variety could bias the classification. In this regard, it is more important to withdraw and infer the meaning of why various clays are used for the making of a particular vessel, rather than creating types and varieties.

Precisely here, I establish my divergence with the ceramic analysis undertaken at Cuello. The most obvious difference between the Cuello and K'axob ceramic classification is decision concerning when to define a new type or variety. Pring (1977a) and Kosakowsky (1987a) established the Cuello types by relying on one single attribute, either the date or the surface treatment of pottery. In contrast, I established a variety based only on "significant attributes", for example, the establishment of Sierra Red: Gadrooned Variety. The name of the new variety, Sierra Red: Gadrooned Variety, is binomial and refers to the ceramic attributes of the variety. In this case, Sierra Red: Gadrooned Variety presented all the characteristics of the Sierra Red Group; however, the decoration of the vessel and the application of the slip differed slightly (see Chapter IV). A red (10R 5/8; 10R 5/6) waxy slip was applied to the surfaces of these vessels, as well as a

yellow slip (5YR 7/8), whose application gives a pronounced mottled effect, not a streaky effect as in Society Hall: Society Hall Variety. The decoration is based on encircling raised grooves in the exterior of bowls. The corresponding form is a bowl with vertical, flared, or rounded sides. The distribution of the Gadrooned Variety restricted to caches or ritual related contexts. The manufacture of the variety involved a new form, decoration, and a specific use. I could not establish the Gadrooned Variety as a new type. The variety did not have many different attributes and was not profoundly distinct from the rest of the Sierra varieties. The new variety had only segments of variation within the units that were only enough to create a variety (Adams 1971:6). I am not ruling out that future excavations could change this assignment into a type. The variety will become a type and will receive a new name once the full range of variation is recognized.

At K'axob, the other established variety relates to Society Hall. Originally, Smith and Gifford (1966:163) established Society Hall as a Variety of Sierra Red. In 1977, Pring suggested that Society Hall was a type at Cuello, based on the surface color differentiation (See Kosakowsky 1987a:64). I decided to maintain Society Hall as a variety of Sierra Red. The frequency of Society Hall at Cuello was very low to elevate this variety to a type (see Kosakowsky 1987a:64). My observations of the Barton Ramie collections suggest that Sierra Red: Society Hall Variety is not as streaky as it is in Belize. Society Hall has appeared at other sites in the Maya area, for example at Tikal (Culbert 1993). Culbert (1993), however, identified Society Hall as a variety of Sierra Red at Tikal.

As the excavations progressed at K'axob, Society Hall sherds appeared with an appliqué decoration. The new decoration confirmed Pring's (1977a) and Kosakowsky's (1987a, b) assumption that Society Hall is a type in itself. Society Hall Variety needs to be established as a type, not on the color differentiation at Cuello (Kosakowsky 1987a:64) or in my observations of the Barton Ramie sherds, but rather on the new decoration applied to the variety. The appliqué decoration to Society Hall Variety supports Kosakowsky's idea that the Cocos Chicanel Ceramic Complex at Cuello could be divided into three facets, based on the ceramic characteristics of the Society Hall material (Kosakowsky 1987b).

At K'axob, Society Hall: Society Hall Variety helps to separate the Late Formative period into three facets, similar to those identified at Cuello (Kosakowsky 1987b). As at Cuello, Society Hall: Society Hall Variety is almost absent in the Early Facet of the K'atabche'kax Ceramic Complex. The Late Facet of the K'atabche'kax Ceramic Complex is contemporaneous with the production of Society Hall flaring-sided bowls with everted rims at Cuello (Kosakowsky 1987b). At the end of the Late Facet, modeled applications occurred in some of the K'axob vessels indicating the beginning of the Terminal Facet. Now, I support that there are enough attributes to make Society Hall a type and that future published monographs should describe Society Hall as a type, not as a variety.

2.- The Typological Divergence. At the Peabody Museum at Harvard, sherd to sherd ceramic comparisons confirmed the presence of Xe types at K'axob, for example, Abelino Red: Abelino Variety. At K'axob, sherds covered with a thin red dark (10R 4/6) slip over a buff under surface were classified as Abelino Red: Abelino Variety, as the ceramic attributes correspond to this Peten type. Pring's (1977a) and Kosakowsky's (1987a) arguments to establish Consejo Red: Consejo Variety encouraged me to classify this Swasey type, as Abelino Red: Abelino Variety, as I discussed in the introduction. The original identification of Abelino Red: Abelino Variety in the ceramics from Colha supported even more my assignment (Adams and Valdez 1979:74). I must admit that the K'axob paste is different in content when compared with the Xe-Real types. The Xe types have a paste that reminds me of the Usumacinta fine paste. I am not implying that the Xe types at K'axob originated in the Usumacinta and this should be clear. The Xe fine paste stayed on my fingers, while carefully handling the sherds. It even made the "clinky" distinctive sound of fine paste sherds.

Originally, the ceramic analysis at K'axob considered the identification of Tower Hill Red-on cream: Tower Hill Variety. Later, I reconsidered the classification of Tower Hill Red-on cream: Tower Hill Variety. While studying the Altar de Sacrificios ceramic collection, housed at the Peabody Museum, I could not distinguish any difference between the sherds from Tower Hill Red-on cream: Tower Hill Variety found at K'axob and the sherds from Toribio Red-on-Cream: Toribio Variety at Altar de Sacrificios. The shortened chronology for Cuello suggests that Tower

Hill Red-on cream: Tower Hill Variety is not anymore an earlier type than Toribio Red-on-Cream: Toribio Variety, encouraging me to classify Tower Hill Red-on cream: Tower Hill Variety sherds as Toribio Red-on-Cream: Toribio Variety.

In the K'axob ceramic assemblage, Guitara Incised: Guitara Variety is also present. The measurements of the incisions made in this variety correspond to those at Seibal, Uaxactun, and Cuello. Pring (1977a) created a new variety at Cuello, Guitara Incised: Grooved-Incised, based on the grooved incisions made in these sherds. The characteristics given by Pring (1977a) and Kosakowsky (1987a) are part of Guitara Incised: Guitara Variety, originally established by Smith and Gifford (1966:170), but a new variety is already in the literature. At K'axob, I decided to classify the sherds as Guitara Incised: Guitara Variety to stop the proliferation of names for this unnecessary variety.

In view of many typological problems found in the establishment of Cuello types, I have not assigned the Swasey related types from K'axob to the Swasey Ceramic Sphere (see Andrews V and Hammond 1990). Instead, I have maintained the Peten ceramic spheres, as K'axob ties most of its types to this area. No new ceramic sphere is suggested for K'axob. As previously stated, a ceramic sphere exists when two or more complexes, separated in space, share a majority of their most common types (Willey, Culbert, and Adams 1967:306-314). In the eventuality, that many of the Cuello types are varieties of Peten types, the ceramic sphere relates to the Peten. If this is not the case, it will be necessary to establish a new ceramic sphere for northern Belize or accept Swasey as a ceramic sphere. At this stage, the existence of a new ceramic sphere for northern Belize is still very unclear.

B.- *Specific Typological Problems*

1.- The Striated Wares. The early occurrence of Sapote Striated: Sapote Variety in a tecomate form, during the early facet of the Chiwa complex at Colha (Valdez 1987a:237), drew my attention. First, the earlier manifestations of unslipped striated pottery appear in Jenney Creek deposits at Barton Ramie (Gifford 1976). Second, Smith and Gifford established Sapote Striated:

Sapote Variety as a Chicanel type, not as a Mamom type (Smith and Gifford 1966:162). Third, Kosakowsky (1987a:56) reports that the Unspecified Variety of Sapote was established by Smith and Gifford (1966:162); however, at Uaxactun it was established as Sapote Variety not as an Unspecified Variety.

Smith and Gifford (1966) did not define a striated type for the Mamom complex at Uaxactun, but unslipped pottery was recovered from Mamom contexts. The original description of this Chicanel type has fine line irregular striations that are limited to vessel bodies, but never to the neck (see Smith and Gifford 1966:162; Adams 1971:19; Sabloff 1975:77; Forsyth 1989:46; López Varela 1989:80). Valdez (1987:237) and Kosakowsky (1987a:56) describe and illustrate Sapote Striated: Unspecified Variety with horizontal striations on the neck. Monkey Falls Striated: Monkey Falls Variety from Barton Ramie, instead, presents striations on the neck. Quite possibly, the tecomate form of Sapote Striated: Sapote Variety at Colha, is a different type. Forsyth (1989:8) confronted a similar problem when trying to analyze the striated wares from El Mirador and followed Adams (1971) and Ball (1977a), in designating the unslipped striated pottery of the Mamom horizon as Sapote Striated: Sapote Variety.

The excavations at K'axob did not provide evidence of striated wares for the Mamom ceramic sphere. As a result, I chose to classify body sherds with fine irregular striations as Sapote Striated: Sapote Variety for the Chicanel sphere. All the body sherds with deep striations were classified as Monkey Falls Striated: Monkey Falls Variety. When the rim sherds had striations on the neck they were included within the Monkey Falls type. Obviously, forms and paste differences were considered to separate both types. I accept that there might be sherds from Monkey Falls Striated: Monkey Falls Variety that were classified as Sapote Striated: Sapote Variety.

2.- The Muxanal Red-on-Cream type and the Pital Group. Smith and Gifford (1966) established Muxanal Red-on-Cream: Unspecified Variety as a member of the Pital Group. Ball (1977a:48) indicates that no relationship between Muxanal Red-on-Cream slipped areas and the Pital Cream exists, suggesting the establishment of an independent Muxanal group to embrace the former. At K'axob, Muxanal Red-on-Cream: Unspecified Variety is characterized by a white matte slip (10YR

8/2) serving as a primary base to geometric or wavy motifs in a dark (red 7.5R 3/8) slip. The white slip for the Muxanal Group is not burnished as in the Pital Group. I agree to place Muxanal Red-on-Cream: Unspecified Variety in a different ceramic group, perhaps a Muxanal Group; however, I am reporting the type within the Pital Group.

3.- The Chicago Group. Pring (1977a) and Kosakowsky (1987a) indicate a variety of the Chicago Orange type for every complex defined at Cuello. I presume the establishment of a variety for each ceramic complex has to do with the chronological problems. At K'axob, the attributes of the Chicago Orange type correspond to the Chucun Variety established at Cuello (Kosakowsky 1987a:82). I must admit that there is a slight difference in the color of the slip between the Mamom and the Chicanel Chicago Group. The clay source or the technique for the manufacture of Chicago Orange: Chucun Variety changed at the end of the Formative period, as the paste is coarser than in previous facets. At K'axob, the characteristics of the Chicago Group do not guarantee the establishment of all these new varieties.

4.- The Joventud and the Sierra Group. The differences between Joventud and Sierra groups are not very clear at certain sites, for example, at El Mirador (Forsyth 1989:7). Forsyth (1989:7) suggests the separation of the Flores Waxy Ware and Paso Caballo Ware is not appropriate, questioning the security with which ceramicists can distinguish Joventud Red from Sierra Red (see Forsyth 1989:7). Forsyth (1989:7) indicates that the general situation during the Preclassic in the Southern Lowlands, as evidenced by twenty years of ceramic analysis, reflects a single waxy ware tradition. Consequently, Forsyth (1989) classified all the waxy monochrome pottery as a single ware, Paso Caballo Waxy, for the Preclassic complexes.

Forsyth (1989:7) does not discard the possibility of the existence of two kinds of slipped wares for the Middle and Late Formative, at certain sites. At K'axob, however, there is a difference between the Mamom Joventud Red and the Chicanel Sierra Red. Certainly, the separation of the type becomes difficult during the transition from Mamom to Chicanel times, from the Early to the Late Facet of the K'atabche'kax ceramic complex. The Mamom Joventud Red has a very distinct red wine or blood color (red 2.5YR 4/6; reddish brown 2.5YR 3/3) in comparison with the red-orange

color of Sierra Red (red 10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6). Obviously, the red wine color has a green tint and the Chicanel has a yellow one, suggesting the use of two different pigments to create this color. I decided to maintain the separation of both wares. The fusion of these wares, into a single waxy ware could have serious consequences for future research, as both wares are markers of two different periods in the history of the Maya Lowlands. This is the perfect case in which regional chemical and petrographic analysis is needed to separate the wares. I believe that the appreciated differences reflect local responses for the making of these widespread groups. I agree with Forsyth (1989:7) that the characteristic of Middle and Late Formative wares is the waxiness; therefore, why should there be two wares? Quite possibly, it is more correct to have only one ware, that is, "realistic, classification" (see Forsyth 1989:7).

5.- The Polychrome Pottery. The classification of orange polychromes is problematic at K'axob because design patterns and the application of a cream base separate these types. Most critical is the separation of Ixcanrio Orange-Polychrome: Ixcanrio Variety, Guacamallo Red-on-orange: Guacamallo Variety, Actuncan Orange Polychrome: Actuncan Variety, and Dos Arroyos Orange Polychrome: Unspecified Variety. I classified all the sherds decorated with circumferential red bands or broad lines near the rim, base, or on the interior side of the vessel, as Guacamallo Orange: Guacamallo Variety in the Holmul Orange ware. When the sherds exhibited the same bands as Guacamallo Orange: Guacamallo Variety, but also a geometric or naturalistic decoration based on dots, wavy lines, or stepped elements, these were classified as Ixcanrio Orange-Polychrome: Ixcanrio Variety in the Holmul Orange ware.

The differences between Ixcanrio Orange-Polychrome: Ixcanrio Variety and Actuncan Orange Polychrome: Actuncan Variety are not very clear, especially when dealing with sherds. According to the stratigraphy at K'axob, Ixcanrio Orange-Polychrome: Ixcanrio Variety and Guacamallo Red-on-orange: Guacamallo Variety occur earlier than the Dos Arroyos group. Early Classic types, however, present also geometric and naturalistic designs. How easily can one distinguish between the Ixcanrio Orange-Polychrome: Ixcanrio Variety and the Peten Gloss ware types?

I decided, when there was an abundance of geometric designs, to define the type as Actuncan Orange Polychrome: Actuncan Variety. Sherds decorated with naturalistic and geometric elements were classified as Dos Arroyos, but also the Ixcanrio type. In other words, Actuncan Orange Polychrome: Actuncan Variety and Dos Arroyos Orange Polychrome: Unspecified Variety are Early Classic polychromes, presenting the same decoration as the Protoclassic types. I accept that some sherds were probably misplaced, but it was really difficult to differentiate between these types and their varieties.[3] Brady (1987:475-476) confronted a similar problem at Naj Tunich and I include Ixcanrio Orange Polychrome and the Guacamallo Red-on-orange in the Peten Gloss ware. Unfortunately, the number of sherds and vessels found at K'axob cannot support a more refined separation of these types and varieties. In the meantime, I am including them within their original assignation.

III.- THE DESCRIPTION FORMAT USED FOR THE K'AXOB CERAMICS

The 48 types and varieties identified in the K'axob material are described in a standard format. The type descriptions are presented by ceramic complex and are arranged by ceramic group in Chapter 4. The following format is an adaptation of the one used at Seibal (Sabloff and Smith 1969 and Sabloff 1975), and later modified for the Yaxchilan and Pomoná ceramics (López Varela 1989, 1994). I am including a definition of the following categories to specify their application to the K'axob ceramics.

I. **General Format:**

Type
Variety
Established
Ceramic Group
Ware
Ceramic Complex
Ceramic Sphere Affiliation

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[3] See Forsyth (1989) to analyze the problems encountered at El Mirador when classifying the polychrome pottery.

II: **Description:**

Principal identifying attributes:

Paste, Temper and Firing:

Surface Finish and Decoration:

Form:

III: **Inter and intra Site Locations:**

Inter-site Locations:

Intra-site Locations:

I. General Format:

Type/variety name. The types or varieties agree with the principles of the type:variety system (Smith, Willey, and Gifford 1960). The variety is the basic unit of analysis of the type:variety system. Each variety of a type may be distinguished from all others in the matter of one or a relatively small number of attributes and the distinction is believed to have chronological and geographical significance (Gifford 1976:10; Ball 1977a:4). With an increased ceramic knowledge (Sabloff and Smith 1969:278), the variety can become a type or one of a number of varieties within the type. A type is a ceramic unit representing an aggregate of distinct ceramic attributes. A type indicates a particular category of pottery produced during a specific time within a region (Sabloff and Smith 1969:278; Gifford 1976:9).

Established. Following each type:variety designation, there is a reference of when and where the type was first defined and named. In this section, I specify the number of sherds or complete vessels on which the description is based and its representative percentage in the entire ceramic complex. The number of sherds includes rims and body sherds. Whenever the sherds could be joined, the sherds counted as one. The numeric information together with the statistical representation of the type within a specific complex, reflects the significance of a type or variety in time, when compare to another complex.

Ceramic Group. "A ceramic group is a configuration of closely related pottery types that demonstrate a distinctive homogeneity in range of variation concerning form, base, color,

technological, and other allied attributes" (Gifford 1963:23). The types included within any given ceramic group are, by extension, always of the same pottery ware (Gifford 1963:23). The types of any ceramic group are roughly contemporaneous elements of the same ceramic complex or complexes, and are always components of the same group (Sabloff and Smith 1969:279).

Ware. This is the conceptual unit concerned with paste composition and surface finish (Sabloff and Smith 1972:98). I determined paste composition by macroscopic examination. Although I describe the paste composition according to its texture and color, paste contents are preliminary identifications. Petrography and neutron activation studies form part of a separate study undertaken by Mary Lee Angelini, a student at Boston University. The petrography results will refine the ware descriptions.

Ceramic Complex. The K'axob ceramic complexes are culturally meaningful units composed of types, varieties, and modes with special regard to a delineated interval of time and space (see Gifford 1976:11). The content of the ceramic complex is what is known of all the pottery used by the inhabitants of K'axob, during a particular interval of time (see Gifford 1976:11). In this regard, the ceramic complex becomes an instrument for dating the site, through the recognition and identification of the ceramic units represented in it (Gifford 1976:11).

Affiliation to Ceramic Sphere. Stratigraphically, many of the types and varieties continue to be produced or used during various ceramic complexes. In the description format, I mention the ceramic sphere for which the type was created originally, adding the name of the next ceramic sphere where the type continues to be present. Therefore, among the ceramic descriptions, one might find that a ceramic type or variety created originally for the Xe ceramic sphere is present in a K'axob Ceramic Complex that does not date to Xe times. This is not a contradiction. Instead, it suggests the continuity in time of a type or variety (see Chapter 2).

II. Description: This section reports the characteristics of a specific K'axob type or variety, subdivided into the following categories:

Principal identifying attributes. This category comprises a summary of the most important characteristics or attributes of the type or variety.

Paste, Temper and Firing. I include a macroscopical description of the paste and firing conditions in this subdivision. Color identifications were made with the Munsell Soil Color Charts. Thickness of the sherds was measured with *Vernier* calipers. Small sections of sherds were obtained with the least possible damage. Textures were subjectively ascribed by observing these sections. Texture was measured in the following scales: fine, medium or coarse. In the paste description, I specify information on core formation. There is a brief macroscopical description of the chemical elements or minerals contained in the paste.

Surface Finish and Decoration. I consider surface finishing as the final treatment given to a vessel before firing or as a prelude to additional decoration (see Rice 1987a:138). In the field, color readings were taken with the Munsell Soil Color Charts (1992), during daylight. At the Laboratory of Boston University, the readings were also taken during daylight, but under neon artificial light. The types and varieties were decorated or finished with the use of the following techniques:

Smoothing: It was a preferred technique at K'axob to create fine and regular surfaces. Vessels were smoothed before they were completely dried with a soft tool, such as a piece of cloth, animal skin, or possibly with the potter's hand (see Rice 1987a:138). Almost all the types and varieties at K'axob were smoothed before the application of a slip. Sometimes, the final surface has a matte or a lustrous finish.

Burnishing: The technique is characteristic of Aguila Orange: Aguila Variety, where the burnishing creates a streaky luster. Burnishing was accomplished by rubbing the surface with a back and forth movement, using a smooth, hard object, such as a pebble, bone, horn, or even seeds (Rice 1987a:138). The rubbing leaves narrow parallel linear facets due to the reorientation of the clay particles (Rice 1987a:138).

Polishing: Most slips at K'axob were polished, giving a uniform luster. This technique was achieved when the vessel surface was already dry. Rice (1987a:138) noted that polishing does not leave the pronounced parallel facets of burnishing.

The surface patterning techniques, identified at K'axob, are brushing and striating. In brushing and striating an irregular toothed or serrated tool was drawn over the surface, creating shallow parallel marks (see Rice 1987:140). Striation was achieved by drawing a toothed or serrated hard-edged tool, such as a shell or chipped stone, across the surface of soft clay (Rice 1987a:140). The strokes follow the same direction, creating regular or irregular patterns. While the strokes were made, clay was removed from the surface. Striation is restricted to Sapote Striated: Sapote Variety and the varieties of Monkey Falls Striated of the K'atabche'kax Ceramic Complex. Probably, the surfaces of these types and varieties were roughened and patterned not only for decoration, but for a functional purpose. Rough surfaces provide a better grip for carrying a heavy wet vessel, improving also heat transfer in cooking (see Rice 1987a:138).

Brushing is a kind of smoothing, created while the clay is still wet, with a bunch of straw or grass (Rice 1987a:140). Generally, brushing cuts the surface of the vessel in a superficial way. Brushing is very common on the Sapote Striated: Sapote Variety and the varieties of Monkey Falls Striated and even on some sherds of Chicago Orange: Chucun Variety.

Decoration of the vessel is here defined as the embellishment of a vessel, beyond the above procedures.

Incising:

Incision is a common type of decoration at K'axob. Fine lines were cut into the surface of a vessel with a pointed tool (Rice 1987a:146). Quite possibly, the incisions were made while the clay was still soft, after the vessel had dried, or even after firing. An incision is a line with a maximum of .1 cm in width, and .1 cm in depth, at the most. Plain incising was done with a sharp pointed implement, forming narrow lines, that are deep, in relation to the width (Adams 1971:37). Incising occurs with other techniques. A vessel can present both

incisions and grooves, even modeled applications, as in the duck effigy vessels. Incising may precede or follow slipping and/or polishing (Smith 1955:37). Fine incising was done very slightly on the surface, with a very sharp-pointed tool, as in Laguna Verde Incised: Laguna Verde Variety. The fine line does not cut the surface to .1 cm in depth.

Gadrooning is a variety of incised decoration, consisting of the modification of broad grooves that are modeled or carved, forming segments that often give round vessels a squash or melon-like appearance (see Rice 1987a:146). Gadrooning occurs in a jar spouted vessel of the Sierra Red: Sierra Variety. Grooving may be done with an instrument that has a broader round or pointed tip, like a gouge (Rice 1987a:146). Grooves have a width and depth of more than .4 cm as in Laguna Verde Incised: Grooved Variety.

Chamfering:

Chamfering is a method restricted to the Chaakkax Ceramic Complex, specifically, to Muxanal Red-on-Cream: Unspecified Variety. Chamfering is a unique form of surface treatment involving the creation of a circumferential raised band usually near the rim (Forsyth 1989:125). In chamfering, regular sections of the clay wall appeared sliced, creating vertical or horizontal panels (Rice 1987a:146). These sections form a series of clapboard-like horizontal steps (Smith 1955:45).

Fluting:

Fluting was accomplished by making shallow, wide semicircular close-set channels in the wet clay (Smith 1955:46), creating one or more contiguous shallow, broad grooves, or channels in the clay, running either around the piece or vertically (Rice 1987a:146). Fluting occurs in the vessels of the Sierra Red: Sierra Variety.

Modeling and Appliqué Decoration:

Modeling and appliqué decoration was commonly used at K'axob. Modeling implies wetting of the clay, to give a specific shape to a vessel or a part of the vessel, using the hands or an instrument. The Sierra Red effigy vessel is a good example of this technique.

Appliqué decoration is the embellishment of a vessel by adding pieces of clay, fashioned by hand (Smith 1955:48). Appliqué decoration was used to represent the facial features of a jar spouted effigy vessel of the Sierra Red Group. Appliqué decoration occurs on the Society Hall: Impressed Variety.

Punctation:

It is the embellishment of a vessel by punching depressions into the wet clay with the point usually of a sharp instrument (Smith 1955:46), as in the sherds of Lagartos Punctated: Lagartos Variety.

Impressing:

A reed was probably used to form the rounded impressions of Repollo Impressed: Unspecified Variety. The impression was accomplished by pressure of various sorts upon the wet clay, with thumb or fingernail impressing most common (Smith 1955:46).

Resist:

This is a process accomplished by the application of wax, or some other material removable by heat, to the parts of a vessel, where it was desired to have a design (Smith 1955:59), as in the Tierra Mojada Resist: Tierra Mojada Variety or Timax Incised: Timax Variety vessel. In resist painting, the surface of the vessel is covered with a temporary coat (Rice 1987a:149). Generally, the background color is darker than the desired design. The dark pigment and the wax serve to resist deposition of the pigment on the areas covered by the wax (Smith 1955:59). When the vessel was exposed to fire, the protective substance melted away and the design appeared in the light color of the original surface. The decoration at K'axob is based on blotches, resembling a trefoil or wavy lines.

Definition of Form:

I followed the proposed scheme by Sabloff (1975) and Castillo and Litvak (1968) to describe vessel forms. Identification of forms relied on complete vessels and rim. Measurements regarding thickness or height of vessels were taken with a *vernier* to define the form of a type or variety. The

height of some vessels was measured with a ruler. John Labadie obtained exact measurements while drawing some vessels. Weight of the vessel is given for future statistical analysis, but also as a record to authenticate the vessel in an unpleasant case of forgery. Forms established for the K'axob ceramic collection comprise four primary classes that include plates, dishes, bowls, vases, and jars (Figure 3.1).

I.- Plates: "Vessel with a height less than 1/5 its diameter" (Sabloff 1975:23).

Divisions: A. Flared sides (Figure 3.1 I.).

II.- Dishes: "Vessel with a height between 1/3 and 1/5 its diameter" (Sabloff 1975: 23).

Divisions: A. Flared sides (Figure 3.1 II.a) B. Outcurved sides (Figure 3.1 II.b) C. Rounded sides (Figure 3.1 II.c).

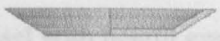
III.- Bowls: "Vessel with height no more than equal but no less than 1/3 of its diameter" (Sabloff 1975:23).

Divisions: A. Vertical sides (Figure 3.1 III.a) B. Flared sides (Figure 3.1 III.b) C. Outcurved sides (Figure 3.1 III.c) D. Rounded sides (Figure 3.1 III.d) E. Slightly incurved sides restricted orifice (Figure 3.1 III.e) F. Markedly incurved sides restricted orifice or tecomate (Figure 3.1 III.f) G. Incurved sides with vertical neck (Figure 3.1 III.g) H. Incurved sides with outflared neck (Figure 3.1 III.h) I. Incurved-recurved sides with outcurved neck (Figure 3.1 III.i) J. Incurved sides with double collar neck (Figure 3.1 III.j).

IV.- Jar: "A necked vessel, whose height is greater than its maximum diameter, with an independent restricted orifice" (Sabloff 1975:23).

Divisions: A. Vertical neck (Figure 3.1 IV.a) B. Outcurved neck (Figure 3.1 IV.b) C. Outflared neck (Figure 3.1 IV.c).

I.- Plates:



a. Flared sides.

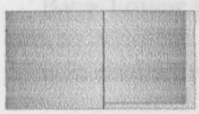
II.- Dishes:

a. Flared sides

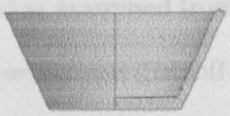
b. Outcurved sides

c. Rounded sides.

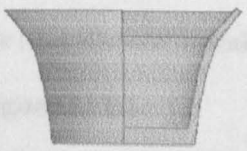
III.- Bowls:



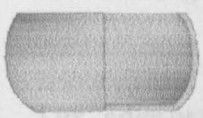
a. Vertical sides



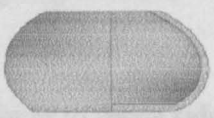
b. Flared sides



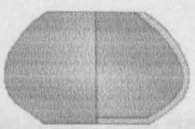
c. Outcurved sides



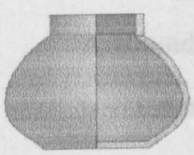
d. Rounded sides



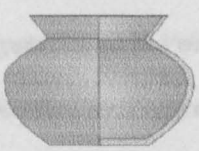
e. Slightly incurved sides restricted orifice



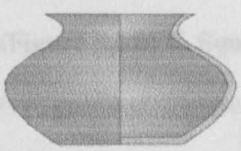
f. Tecomate



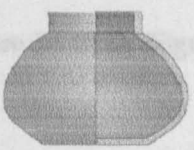
g. Incurved sides with vertical neck



h. Incurved sides with outflared neck

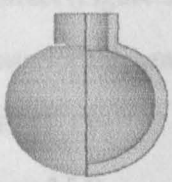


i. Incurved-recurved sides with outcurved neck



j. Incurved sides with double collar neck

IV.- Jars:

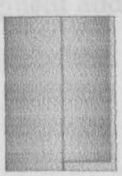


a. Vertical neck

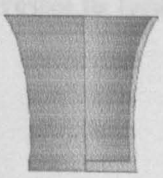
b. Outcurved neck

c. Outflared neck

V.- Vases:



a. Vertical sides or cylinder



b. Outcurved sides

Figure 3.1 K'axob Typology of Vessel Forms.

V.- Vases: "An unrestricted vessel with height greater than diameter" (Sabloff 1975:23).

Divisions: A. Vertical sides or cylinder (Figure 3.1 V.a) Outcurved sides (Figure 3.1 V.b).

Parts of a Vessel : Subdivisions

Body: Any fragment of the vessel between the neck juncture and the base (Castillo and Litvak 1968:9). (Figure 3.2 I.)

Base: Lower part of the vessel as examined from the exterior (Castillo and Litvak 1968:8), that is in contact with the ground or support (Sabloff 1975:24). (Figure 3.2 II.)

A. Flat (Figure 3.3 A.) B. Slightly rounded (Figure 3.3 B.) C. Rounded (Figure 3.3 C.) D. Incurved (Figure 3.3 D.) E. Ring (Figure 3.3 E).

Lip: "Edge or tip of rim". Additions to vessel sides, rims, or bases (other than ring and pedestal bases and flanges) (Sabloff 1975:24) (Figure 3.2 III.)

A. Rounded (Figure 3.4 A) B. Pointed (Figure 3.4 B) C. Squared (Figure 3.4 C) D. (Figure 3.4 D) beveled-out E. Beveled-in (Figure 3.4 E) F. grooved (Figure 3.4 F).

IV.- Rims: Margin of vessel orifice (Castillo and Litvak 1968:9). (Figure 3.2 IV.)

A. Direct (Figure 3.5 A) B. Exterior pointed (Figure 3.5 B) C. Exterior thickened (Figure 3.5 C) D. Interior thickened (Figure 3.5 D) E. Exterior folded (Figure 3.5 E) F. Interior folded (Figure 3.5 F) G. Everted (Figure 3.5 G) H. Horizontal everted (Figure 3.5 H) I. Outflared everted (Figure 3.5 I).

V.- Neck: Fragment added to the top part of a vessel to facilitate the pouring of a liquid. (Figure 3.2 V.)

VI.- Bottom: The interior part of the base. (Figure 3.2 VI.)

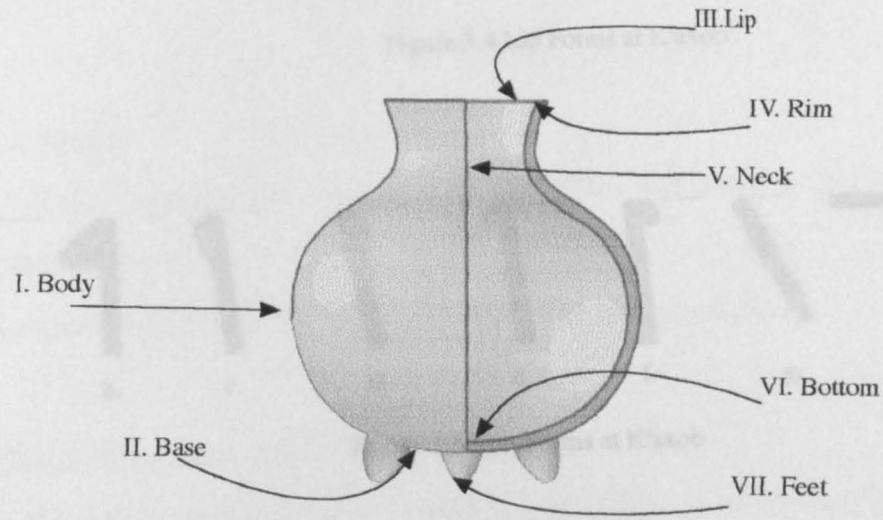


Figure 3.2. Main Parts of a Vessel. (After Castillo and Litvak 1968)

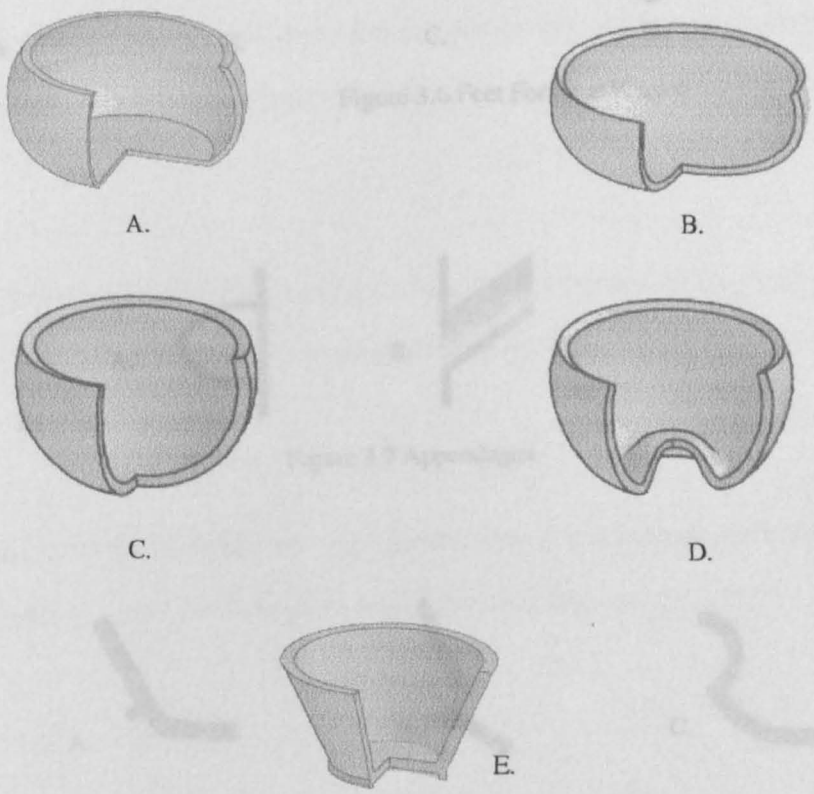


Figure 3.3 Base Forms at K'axob

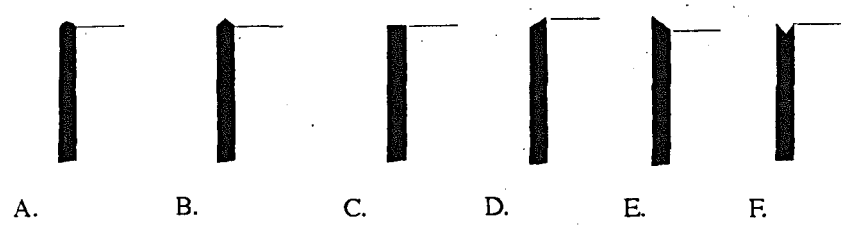


Figure 3.4 Lip Forms at K'axob

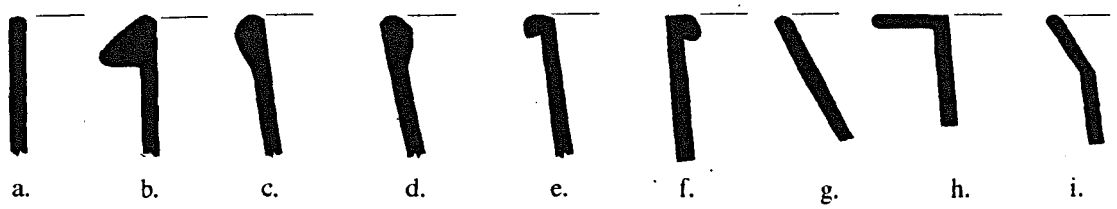


Figure 3.5 Rim Forms at K'axob

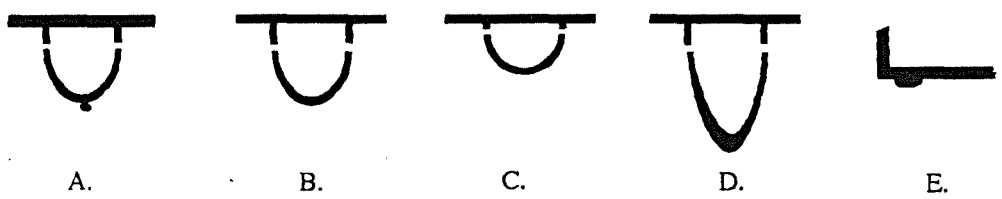


Figure 3.6 Feet Forms at K'axob

Figure 3.7 Appendages

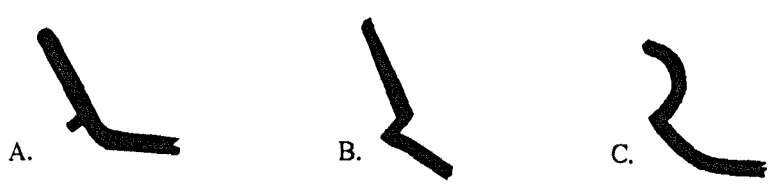


Figure 3.8. Flanges, Ridges, and Angles at K'axob

Feet: It is an addition to the base. (Figure 3.2 VII.)

A. Hollow mammiform feet (Figure 3.6 A) B. Hollow conical (Figure 3.6 B) C. Hollow rounded (Figure 3.6 C) D. Hollow conical with modeled tip (Figure 3.6 D) E. Solid nubbin feet (Figure 3.6 E)

Appendages

"Additions to vessel side, rim, or bases (other than ring and pedestal bases and flanges)" (Sabloff 1975: 27).

A. Strap handle (Figure 3.7 A) B. Unsupported spout (Figure 3.7 B).

Flanges, Ridges and Angles:

A. Basal-flange (Figure 3.8 A) B. Z-Angle (Figure 3.8 B) C. Medial Flange (Figure 3.8 C).

Inter and Intra-site Location:

Intra-site Location: The distribution of the types is described here, including references to specific contexts. Detailed provenience information is also given for the complete vessels found at K'axob.

Inter-site Location: This section provides comparative information regarding the distribution of a type or variety, at various sites. Inter-site citations refer to the relevant comparative sources used to identify types and varieties.

Illustrations: The ceramic material is illustrated with line drawings. Photographs are included, for most types, to obtain a better appreciation of surface texture.

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Desvario Chamfered: Unspecified Variety 152

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Sierra Red: Unspecified Variety 209

Society Hall: Society Hall Variety 218

Union Appliqué: Unspecified Variety 231

The K'atabche'kax Ceramic Complex: The Late Facet

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Flor Cream: Unspecified Variety 182

Guitara Incised: Guitara Variety 164

Hillbank Red: Hillbank Variety 229

Joventud Red: Unspecified Variety 168

Laguna Verde Incised: Laguna Verde Variety 184

Monkey Falls Striated: Monkey Falls Variety 174

Monkey Falls Striated: Unspecified (Brown) Variety 178

Muxanal Red-on-Cream: Unspecified Variety 163

Polvero Black: Unspecified Variety 232

Puletan Red and Unslipped: Puletan Variety 217

Repollo Impressed: Unspecified Variety 233

Sapote Striated: Unspecified 179

Sierra Red: Sierra Variety 191

Sierra Red: Gadrooned Variety 212

Society Hall: Society Hall Variety 218

Society Hall: Society Hall Impressed Variety 226

Union Appliqué: Unspecified Variety 231

Unnamed Usulutan Group: Unnamed Red-on-orange 235

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Laguna Verde Incised: Grooved Variety....186
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Actuncan Orange Polychrome: Actuncan Variety 244

Aguila Group

Aguila Orange: Aguila Variety 248

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Aguacate Ceramic Group

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Balanza Group

Balanza Black: Unspecified Variety 252

Lucha Incised: Unspecified Variety 254

Chicago Group

Chicago Orange: Chucun Variety 137, 172

Chunhinta Ceramic Group

Chunhinta Black: Unspecified Variety 126

Dos Arroyos Ceramic Group

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Flor Group

Flor Cream: Unspecified Variety 182

Hillbank Group

Hillbank Red: Hillbank Variety 229

Joventud Group

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Desvario Chamfered: Unspecified Variety 152

Joventud Red: Unspecified Variety 142, 168

Joventud Red: Jolote Variety 145, 170

Guitara Incised: Guitara Variety 146, 164

Guitara Incised: Pollo Desnudo Variety 166

Matamore Group

Matamore Dichrome: Matamore Variety 157

Monkey Falls Group

Monkey Falls Striated: Monkey Falls Variety 174

Monkey Falls Striated: Unspecified (Brown) Variety 178

Muxanal Group

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Pital Group

Pital Cream: Pital Variety 132

Pital Cream: Red-slipped Unspecified Variety 134

Polvero Group

Polvero Black: Unspecified Variety 232

Pucte Group

Santa Teresa Incised: Santa Teresa Variety 258

San Martin Group

San Martin Variegated Brown: San Martin Variety 256

Sapote Group

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Sierra Group

Lagartos Punctated: Lagartos Variety 189

Laguna Verde Incised: Laguna Verde Variety 184

Laguna Verde Incised: Grooved Variety 186

Puletan Red and Unslipped: Puletan Variety 217

Repollo Impressed: Unspecified Variety 233

Sierra Red: Sierra Variety 159, 191

Sierra Red: Gadrooned Variety 212

Sierra Red: Unspecified Variety 209

Society Hall: Society Hall Variety 218

Society Hall: Society Hall Impressed Variety 226

Union Appliqué: Unspecified Variety 231

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Timax Incised: Timax Variety 130

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Flores Waxy Ware

Black Rock Red: Black Rock Variety 161

Chunhinta Black: Unspecified Variety 126

Desvario Chamfered: Unspecified Variety.....152

Joventud Red: Unspecified Variety.....142, 168

Joventud Red: Jolote Variety.....145, 170

Guitara Incised: Guitara Variety.....146, 164

Guitara Incised: Pollo Desnudo Variety. 166

Muxanal Red-on-Cream: Unspecified Variety.....154, 163

Pital Cream: Pital Variety 132

Pital Cream: Red-slipped Unspecified Variety 134

Tierra Mojada Resist: Tierra Mojada Variety 128

Timax Incised: Timax Variety 130

Gale Creek Red Ware

Hillbank Red: Hillbank Variety....229

Holmul Orange Ware

Aguacate Orange: Aguacate Variety....236

Guacamallo Red-on-Orange: Guacamallo Variety....240

Ixcanrio Orange-Polychrome: Ixcanrio Variety....241

Paso Caballo Waxy Ware

Flor Cream: Unspecified Variety....182

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Laguna Verde Incised: Grooved Variety....186

Matamore Dichrome: Matamore Variety....157

Polvero Black: Unspecified Variety....232

Puletan Red and Unslipped: Puletan Variety....217

Sierra Red: Sierra Variety....159, 191

Sierra Red: Gadrooned Variety....212

Sierra Red: Unspecified Variety....209

Society Hall: Society Hall Variety....218

Society Hall: Society Hall Impressed Variety....226

Union Appliqué: Unspecified Variety....231

Peten Gloss Ware

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Monkey Falls Striated: Unspecified (Brown) Variety 178

Sapote Striated: Sapote Variety.....179

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Appliqué

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Black

Balanza Black: Unspecified Variety.....252

Chunhinta Black: Unspecified Variety 126

Polvero Black: Unspecified Variety 232

Brown

San Martin Variegated Brown: San Martin Variety 256

Cream

Flor Cream: Unspecified Variety.....182

Pital Cream: Pital Variety 132

Chamfered

Desvario Chamfered: Unspecified Variety 152

Incised

Guitara Incised: Guitara Variety 146, 164

Guitara Incised: Pollo Desnudo Variety 166

Laguna Verde Incised: Laguna Verde Variety 184

Lucha Incised: Unspecified Variety 254

Pita Incised: Unspecified Variety 251

Santa Teresa Incised: Santa Teresa Variety 258

Timax Incised: Timax Variety 130

Incised-Grooved

Laguna Verde Incised: Grooved Variety 186

Impressed

Repollo Impressed: Unspecified Variety 233

Society Hall: Society Hall Impressed Variety 226

Gadrooned

Sierra Red: Gadrooned Variety 212

Orange

Aguacate Orange: Aguacate Variety 236

Aguila Orange: Aguila Variety 248

Chicago Orange: Chucun Variety 137, 172

Orange on Cream

Unnamed Orange-on-Cream: 236

Orange Polychrome

Actuncan Orange Polychrome: Actuncan Variety 244

Dos Arroyos Orange Polychrome: Unspecified Variety 261

Ixcanrio Orange-Polychrome: Ixcanrio Variety 241

Unnamed Polychrome....244

Polychrome

Yaloche Cream Polychrome: Unspecified Variety....260

Punctated

Lagartos Punctated: Lagartos Variety....189

Red

Hillbank Red: Hillbank Variety....229

Joventud Red: Unspecified Variety....142, 168

Puletan Red and Unslipped: Puletan Variety....217

Sierra Red: Sierra Variety....159, 191

Sierra Red: Gadrooned Variety 212

Sierra Red: Unspecified Variety 209

Society Hall: Society Hall Variety....218

Red Brown

Black Rock Red: Black Rock Variety 161

Red on Cream

Matamore Dichrome: Matamore Variety....157

Muxanal Red-on-Cream: Unspecified Variety....154, 163

Pital Cream: Red-slipped Unspecified Variety 134

Toribio Red-on-Cream: Toribio Variety 124

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Resist

Tierra Mojada Resist: Tierra Mojada Variety 128

Striated

Monkey Falls Striated: Monkey Falls Variety 174

Monkey Falls Striated: Unspecified (Brown) Variety 178

Sapote Striated: Sapote Variety 179

II.- DESCRIPTION OF THE TYPES AND VARIETIES OF THE CHAAKKAX CERAMIC COMPLEX: THE LATE MIDDLE FORMATIVE

Type	ABELINO RED
Variety	Abelino
Established	Altar de Sacrificios (Adams 1971:20) Description at K'axob based on 23 sherds, representing 0.21% of the total Chaakkax Ceramic Complex.
Ceramic Group	Abelino
Ware	Rio Pasion Slipped
Ceramic Complex	Chaakkax Early Facet
Ceramic Sphere Affiliation	Xe-Mamom

Principal Identifying Attributes:

(1) A dark red (10R 4/6) overall slip or a very dark grayish brown slip (10YR 8/3) applied on a white (10YR 8/1) underslip. (2) The identified form is a dish with flared and outcurved sides. (3) Incisions, foldings, and ridges decorate the vessel exterio. (4) The paste is fine and has a gray (5Y 6/1) color. The paste shows small white particles.

Paste, Temper, and Firing:

The paste presents a fine texture and has a gray (5Y 6/1) color. The paste contains calcite flakes and red particles. The firing of these vessels did not develop a core in most sections.

Surface Finish or Decoration:

Surfaces are smoothed and even. The color varies from red (10R4/6; 10R5/6) to a very dark grayish brown (10YR 8/3). The red slip was applied on a white (10YR 8/1) underslip. Fire clouding occurs on the surface in a reddish black (10R 2.5/1) color. The dark red slip tends to

weather leaving a buff undersurface, and forms patched alternating zones. The slip covers the interior and exterior surfaces of the vessels.

A very distinctive decoration occurs on the exterior surface. The vessels are decorated with a circumferential incision at 1.9 cm from the rim. Circumferential ridges and vertical and horizontal folds define geometric zones on the vessel (Figure 4.1). The ridges and pre-fired incisions help to separate the color-patterned sections. Sometimes, the vessels present a circumferential incision near the base. It is also common to find finger-nail impressions on some of the ridges.

Forms:

Dish Forms. The identified form corresponds to dishes with flared or outcurved sides. Dishes vary in diameter between 16 to 30 cm. Vessel thickness ranges from .3 to 1 cm. Diameter of base is 28 cm.

Inter and intra-site distribution:

Intra-site distribution:

The concentration of Abelino Red: Abelino Variety fragments was present in Operation I. During Phase I-Operation I, Abelino Red occurred in sherd-lined pits and in Burial 42 (Phase II).

Inter-site distribution:

Altar de Sacrificios: *Xe* (Adams 1971:20); Colha: *Mamom The Early Phase* (Adams and Valdez 1979:74); Seibal: *Real* (Sabloff 1975:48).

Illustration: Figure 4.1

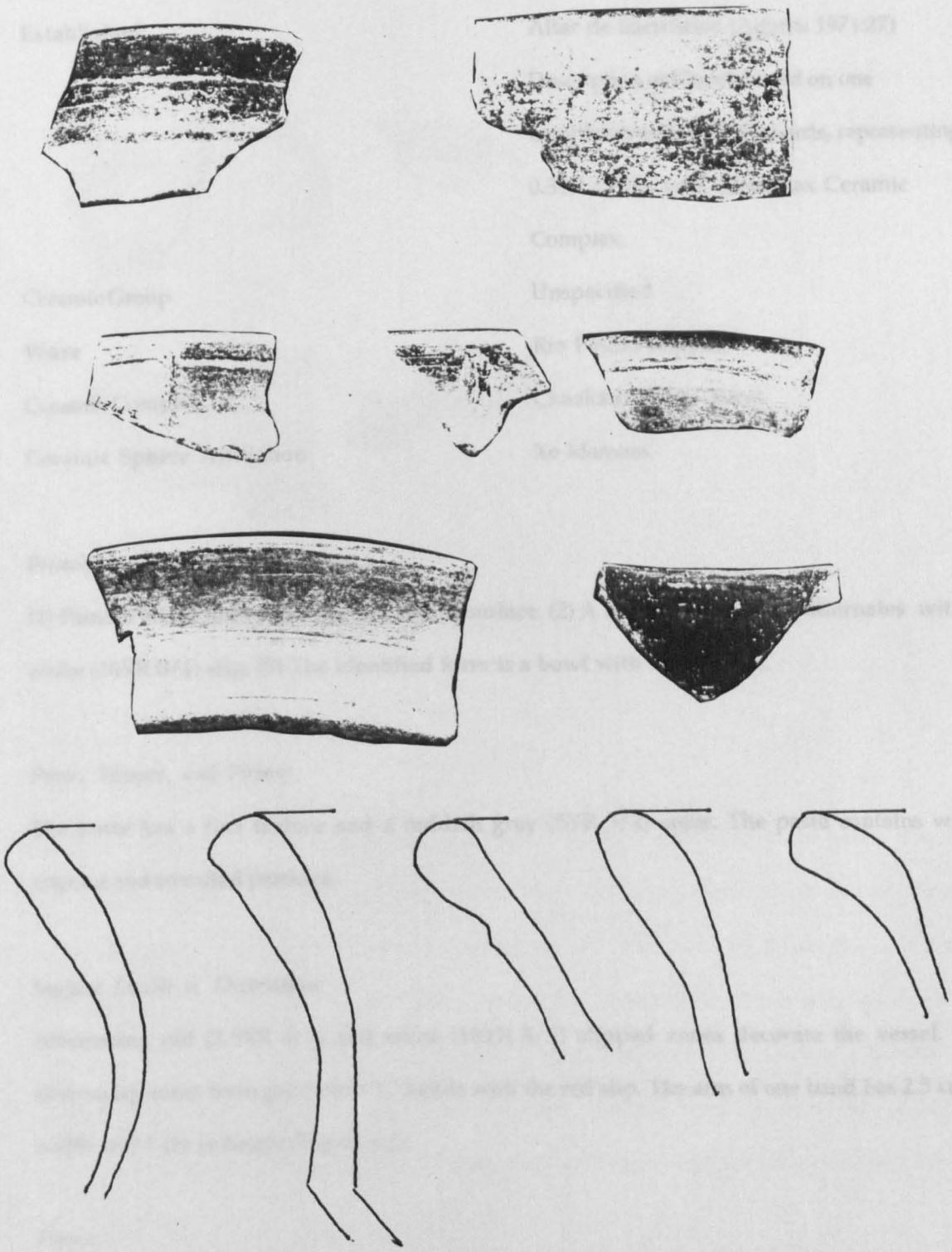


Figure 4.1 Rim Profiles and Sherds of Abelino Red: Abelino Variety.

Type	TORIBIO RED-ON-CREAM
Variety	Toribio
Established	Altar de Sacrificios (Adams 1971:27) Description at K'axob based on one complete vessel and 35 sherds, representing 0.31% of the total Chaakkax Ceramic Complex.
Ceramic Group	Unspecified
Ware	Rio Pasion Slipped
Ceramic Complex	Chaakkax Early Facet
Ceramic Sphere Affiliation	Xe-Mamom

Principal Identifying Attributes:

(1) Painted broad lines occur on the exterior surface. (2) A red (2.5YR 4/8) slip alternates with a white (10YR 8/1) slip. (3) The identified form is a bowl with flared sides.

Paste, Temper, and Firing:

The paste has a fine texture and a reddish gray (5YR 5/2) color. The paste contains white angular and rounded particles.

Surface Finish or Decoration:

Alternating red (2.5YR 4/8) and white (10YR 8/1) slipped zones decorate the vessel. The alternating zones form geometric "L" bands with the red slip. The arm of one band has 2.5 cm in width and 7 cm in height (Figure 4.2)

Forms:

Bowl Forms. The identified form corresponds to bowls with flared sides. Thickness of most sherds is .5 cm. Diameter of these vessels is usually 18 cm. The rim is direct with a rounded lip.

Figure 4.2 Sherds of Toribio Red on Cream: Toribio Variety.

Inter and intra-site distribution:

Intra-site distribution:

Toribio Red: Toribio Variety occurs in Operation I. The type was found in the paleosol level and in a midden (Zone 63 Phase I). In Phase IIa, the fragments were scattered on a floor (Zone 219) and in Burial 42. A complete bowl with flared sides was found in a pit (Phase IIa-Operation I I-481 Zone 219). It has a direct rim and rounded lip. Diameter is 18 cm and has a flat base. Thickness of sides is .5 cm. The paste has white angular and rounded inclusions. The color of the paste is reddish gray (5YR 5/2). The decoration consists of red bands. Total weight of 17 pieces is 702 gr. In Phase IIb, the sherds were found inside a posthole and in a midden (Zones 59 and 57 of Phase IIc).

Inter-site distribution:

Altar de Sacrificios: *Xe* (Adams 1971:27); Kosakowsky reported this type as Tower Hill: Red-on-Cream Variety (1987a:32). The type appeared also at Colha: *Bolay* (Valdez 1987:62).

Illustration: Figure 4.2

Type	CHUNHINTA BLACK
Variety	Unspecified
Established	(Smith and Gifford 1966:156) Description at K'axob based on a total of 25 sherds, representing 0.22% of the total Chaakkax Ceramic Complex
Ceramic Group	Chunhinta
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early Facet
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes:

(1) A black (10YR 2/1) waxy slip covers the surfaces of this type. (2) The identified form corresponds to bowls with rounded sides.

Paste, Temper, and Firing:

The paste has a fine texture and a reddish gray (5YR 5/2) color. No core found on these vessels. The paste contains white particles.

Surface Finish or Decoration

The surfaces are slipped with a black (10YR 2/1; 7.5R 2.5/0) waxy slip. The vessel was decorated with a series of chamfers that give a clapboard effect. The chamfering begins near the rim.

Forms

Bowl Forms. Bowls with rounded sides present an average diameter ranging from 20 to 22 cm. Thickness of vessels varies from .7 to .9 cm. One sherd example of a rounded bowl has a flat base, measuring 36 cm in diameter. The rim, due to the clapboard effect, resembles a flag (Figure 4.3)

Tecomate Forms. Tecomate have incurved sides and a restricted orifice. Average diameter is 6 cm. Tecomates present the same thickness as bowls with rounded sides.

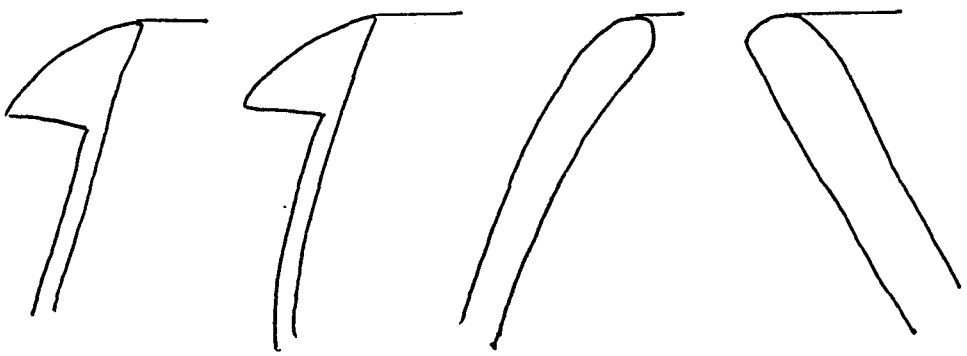


Figure 4.3 Rim Profiles of Chunhinta Black: Unspecified Variety.

Inter and intra-site distribution:

Intra-site distribution:

The concentration of Chunhinta Black: Unspecified Variety is present in Operation I. Sherds were found on a floor (Zone 219) and in middens (Zone 87, 59 and 57).

Intra-site distribution:

Altar de Sacrificios: *San Felix* (Adams 1971:46); Barton Ramie: *Jenney Creek* (1976:82); Colha: *Mamom The Early Phase-Chiwa* (Adams and Valdez 1979:74; Valdez 1987:87); Cuello: *López Mamom* (Kosakowsky 1987a:47); Komchen: *Early Nabanche* (Andrews V 1988:52); Seibal: *Escoba* (Sabloff 1975:69); Chunhinta Group at Yaxha-Sacnab *Ah Pam Early Mamom* (Rice

1979:13); Tayasal-Paxcaman zone: *Chunzalam* (A. Chase 1984:27); Tikal: *Eb* (Culbert 1993:5); Uaxactun (Smith and Gifford 1966:156).

Illustration: Figure 4.3

Type	TIERRA MOJADA RESIST
Variety	Tierra Mojada
Established	Seibal (Sabloff 1975:71). Description at K'axob based on 112 sherds, representing 1.01% of the total Chaakkax Ceramic Complex.
Ceramic Group	Tierra Mojada
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early Facet
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes:

(1) An orange (red 2.5YR 4/8) slip over a pinkish gray (7.5YR 7/2) or pink (7.5YR 7/4) underslip covers the surface of these vessels. (2) A patterned decoration is very common. (3) The identified form corresponds to bowls with outcurved sides.

Paste, Temper, and Firing:

The paste has a fine texture and a reddish yellow (7.5YR 6/6) color. No core formation occurs in these vessels.

Surface Finish or Decoration

A pinkish gray (7.5YR 7/2) or pink (7.5YR 7/4) underslip was applied to these vessels. The overlying slip is orange or red (2.5YR 4/8). The application of the orange slip sometimes is very thin, degrading to pink (7.5YR 8/3). The thin slip occurs near the borders of the negative or resist design.

Forms

Bowl Forms. The only identified form corresponds to bowl with outcurved sides (Figure 4.4). Thickness of most sherds is .8 cm. Diameter of these vessels is usually 32 cm.

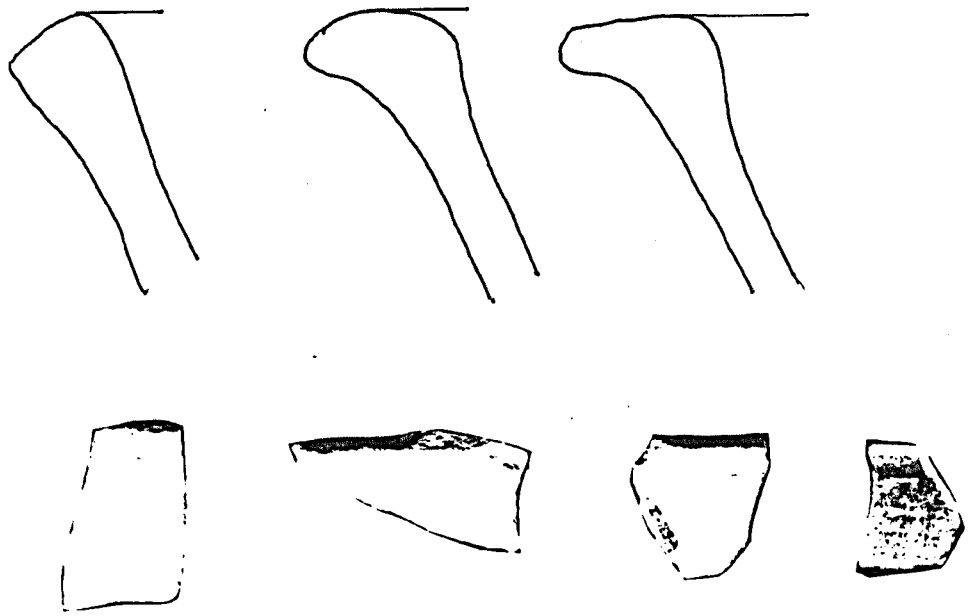


Figure 4.4 Sherd Examples and Rim Profiles of Tierra Mojada Resist: Tierra Mojada Variety.

Inter and intra-site distribution:

Intra-site distribution:

The fragments concentrate on Operation I, specifically, in Burial 43 (Zone 233-Phase I). The type is also present in middens (Zone 219 and 63) and in Burial 42.

Inter-site distribution

Colha: *Chiwa Complex* (Valdez 1987); Yaxha-Sacnab Yancotil: *Late Mamom Complex* (Rice 1979:23); Piedras Negras: Balche (Holley 1986:62); Seibal *Escoba* (Sabloff 1975:71).

Illustration: Figure 4.4

Type	TIMAX INCISED
Variety	Timax
Established	Seibal (Sabloff 1975:73). Description at K'axob based on one complete vessel and 12 sherds, representing 0.11% of the total Chaakkax Ceramic Complex.
Ceramic Group	Tierra Mojada
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early Facet
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes:

(1) Broad line incisions occur on slightly everted rim and bottom incised lines. (2) An orange (red 2.5YR 4/8) slip over a pinkish gray (7.5YR 7/2) or pink (7.5YR 7/4) underslip covers the surface of these vessels. (3) A patterned decoration is common (4) The identified form corresponds to bowls with outcurved sides.

Paste, Temper, and Firing:

The paste has a fine texture and a reddish yellow (7.5YR 6/6) color. No core formation occurs in these vessels.

Surface Finish or Decoration

A pinkish gray (7.5YR 7/2) or pink (7.5YR 7/4) underslip was applied to these vessels. The overlying slip is orange or red (2.5YR 4/8). The application of orange slip corresponds to that of Tierra Mojada Resist: Tierra Mojada Variety. The slip is also very thin, degrading to a pink (7.5YR 8/3) color near the borders of the negative or resist design (Figure 4.5).

The vessels are decorated with broad lines or circumferential incised lines near the rim or at the bottom of the vessel. The lines measure .3 or .4 in width. The resist decoration forms various

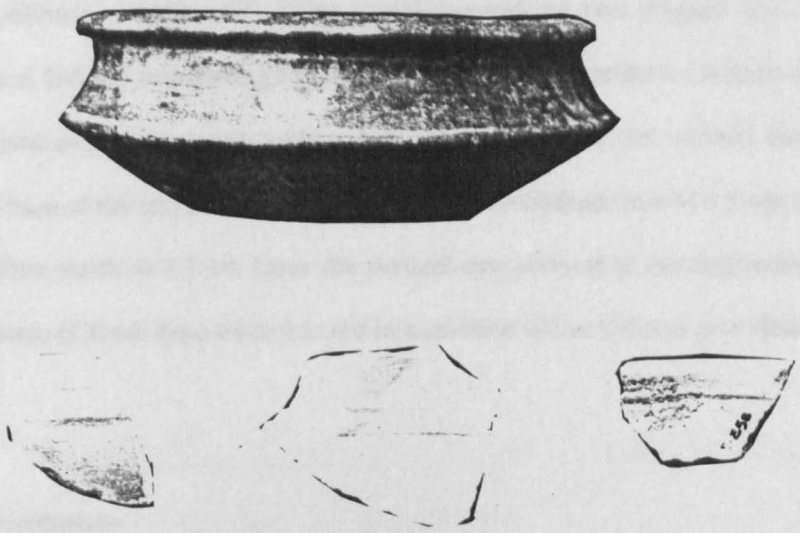


Figure 4.5 Rim Profiles and a Complete Vessel of Timax Incised: Timax Variety.

geometric forms, such as dots or bands. A trefoil, formed by the negative technique, is very common at K'axob.

Forms

Bowl Forms. Bowls with incurved-recurved sides and outcurved neck are present in the ceramic sample. The rim everts to the exterior or it is interior-thickened. Thickness of most sherds is .8 cm. Diameter of these vessels varies from 30 to 32 cm. Bases are usually rounded. Thickness of vessels varies from .8 to 1 cm.

Inter and intra-site distribution:

Intra-site distribution:

A bowl with incurved-recurved sides was found in Burial 43 (Operation I Phase I I-532 Zone 233). The paste has a fine texture with a reddish yellow (7.5YR 6/6) color. There is no core formation. The recurved side starts at 3 cm from the rim. The base is slightly rounded. The diameter of the vessel is 32 cm. Its weight is 981.5 gr. and its total height 7.5. Thickness of sides is .8 cm. The vessel is covered with an orange or red (2.5YR 4/8) slip, but also presents a pinkish

gray (7.5YR 7/2 or 7.5YR 7/3) underslip. The rim is decorated with red slip dots that help to separate the different colored areas. Red slipped trefoils were added to the interior bottom of the vessel, continuing on the walls of the vessel, toward the rim (Figure 4.5). Blotches are also on the exterior, but are not distinguishable in form. The decoration consists of pre-fired broad round bottomed incised lines, measuring .3 to .4 cm in width. An incised circumferential line begins at the base of the rim having .4 cm in width. A second one run at 1.2 cm from the first one and a third line starts at 1.2 cm from the second one, almost at the beginning of the recurved sides. Fragments of these type were present in a midden (Zone 59) and on a floor (Phase II Stage c).

Inter-site distribution

Seibal: *Escoba* (Sabloff 1975:71).

Illustration: Figure 4.5

Type	PITAL CREAM
Variety	Pital
Established	Uaxactun (Smith and Gifford 1966:161). Description at K'axob based on a total of 137 sherds, representing 1.23% of the total Chaakkax Ceramic Complex.
Ceramic Group	Pital
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early Facet
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes:

(1) A thin white (10YR 8/1) slip covers the surfaces of this type. (2) Bowls with flared sides are the common form; however, a tecomate form also occurs in the ceramic sample.

Paste, Temper, and Firing:

The paste has a fine texture and presents a light brownish gray (10YR 6/2) color. The paste contains red particles that show through the surface.

Surface Finish or Decoration

The surfaces vary in color from white (10YR 8/1) to a light gray (10YR 7/1). The slip is thin and soft, covering both sides of the vessels (Figure 4.6).

Forms

Bowl Forms. Bowls with flared sides present a direct rim and rounded lip. Diameters vary from 6 to 12 cm. Thickness of vessels measures from .5 to 1 cm.

Tecomate Forms. Bowls with incurved sides and a restricted orifice have an estimated diameter of 10 cm. The rims are interior thickened. Vessel thickness varies from .5 to 1 cm. One tecomate rim presents a perforation.

Inter and intra-site distribution:

Intra-site distribution:

Pital fragments were found in the paleosol levels of Operation I, as part of middens (Zones 63, 162, 87B, 59, 57) and in the construction fill of a floor (Zone 58).

Inter-site distribution:

Altar de Sacrificios: *San Felix* (Adams 1971:26-26); Colha: *Mamom The Early Phase* (Adams and Valdez 1979:74); Cuello: *López Mamom* (Kosakowsky 1987a:48); Tayasal-Paxcaman zone: *Chunzalam* (A. Chase 1984:29); Yaxha-Sacnab: *Ah Pam Early Mamom/Yancotil Late Mamom Complex* (Rice 1979:13, 23); Uaxactun (Smith and Gifford 1966:161).

Illustration: Figure 4.6

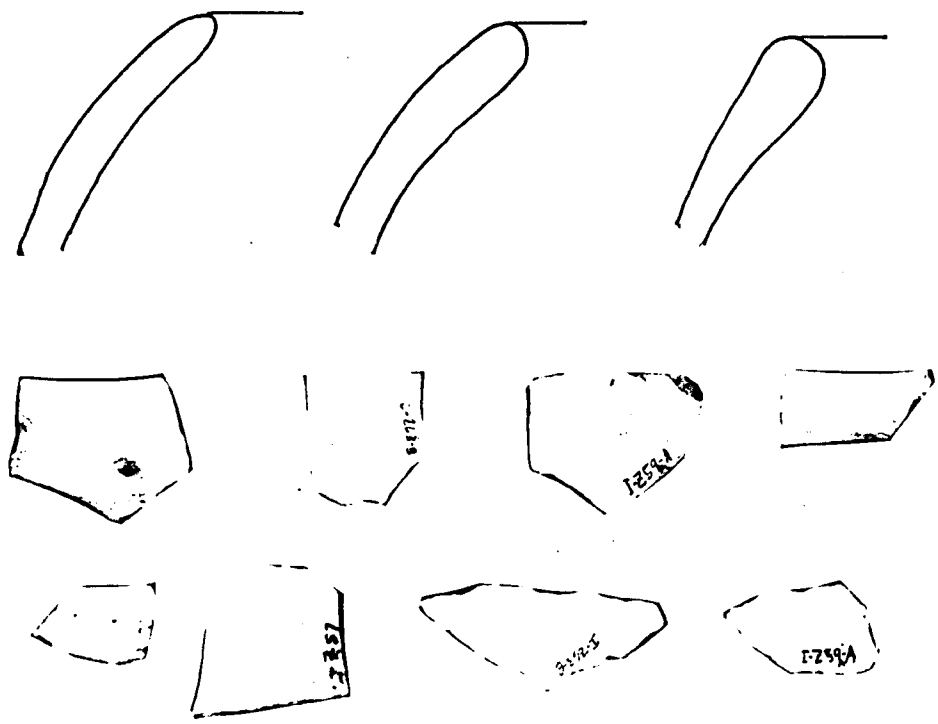


Figure 4.6 Rim Profiles and Sherds of Pital Cream: Pital Variety.

Type	PITAL CREAM
Variety	Red-slipped Unspecified Variety
Established	Uaxactun (Smith and Gifford 1966:161) Description at K'axob based on 61 sherds, representing 0.55% of the total Chaakkax Ceramic Complex.
Ceramic Group	Pital
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early Facet
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes:

(1) A thin white (10YR 8/1) slip covers the exterior surface. The interior surface is red (2.5YR 5/6). (2) Bowls or dishes with flared sides are common in the sample.

Paste, Temper, and Firing:

The paste has a fine texture and presents a light brownish gray (10YR 6/2) color. The paste contains red particles that show through the surface.

Surface Finish or Decoration

The surfaces vary in color from light gray (10YR 7/2) to a light brownish gray (10YR 6/2) and even a very pale brown (10YR 8/3). Also, the exterior surface is decorated with a circumferential band. A red (2.5YR 5/6) slip covered the interior surface (Figure 4.7).

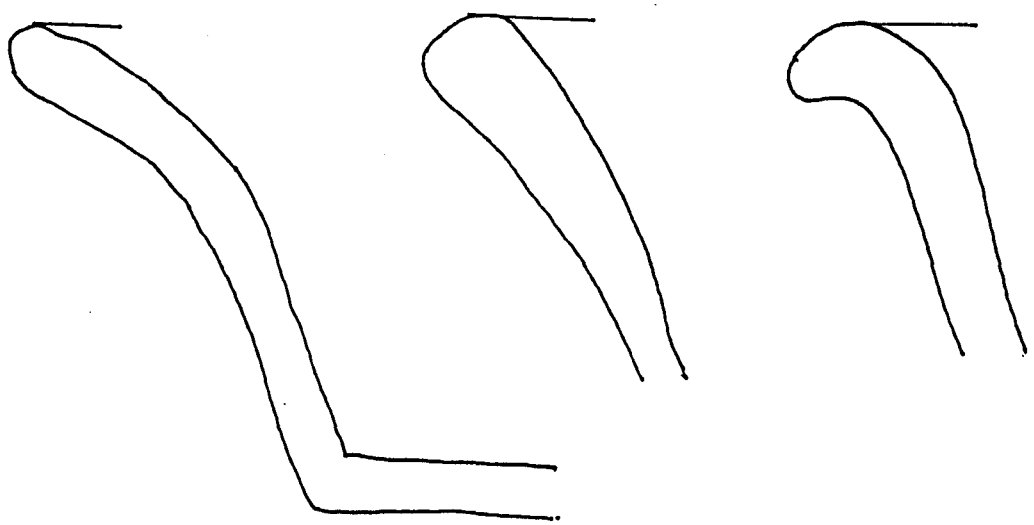


Figure 4.7 Rim Profiles of Pital Cream: Red-slipped Unspecified Variety.

Forms

Bowl Forms. The forms are bowls or dishes with outcurved sides. Diameters vary from 28 to 30 cm. Vessel thickness measures from .5 to 1 cm. It seems that this variety presents also a tecomate form, having 10 cm in diameter; however, the rim sherd was too small and very fragmented.

Inter and intra-site distribution:

Intra-site distribution:

Pital Cream: Unspecified Red Slipped Variety fragments were found in the paleosol levels of Operation I. In Phase I, the type occurs in sherd-lined pits and in construction fill. In Phase IIa, sherds of this type were present in middens (Zones 175 and 87B), in a posthole and in Burials 37 and 42. In Phase IIc, the type was present in construction fill and also in middens (Zones 57 and 59).

Inter-site distribution

The Unspecified Red Slipped variety has been reported at Barton Ramie: *Jenney Creek* (1976:81).

Illustration: Figure 4.7.

Type	Unnamed Resist Orange
Ceramic Complex	Description at K'axob based on 3 sherds, representing 0.03% of the total Chaakkax Ceramic Complex. Chaakkax Early Facet
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes

The sherds are smoothed and washed with a thin light orange-red slip (2.5YR 4/8), that is often polished.

Paste, Temper, and Firing:

The paste has a fine texture containing, probably, fine calcite inclusions. No core was formed in these sherds.

Surface Finish or Decoration

Sherds have a thin light orange-red (2.5YR 4/8) slip that was applied to both sides. The decoration consists of abstract patterns formed by the resist technique. The resist patterns occur in a very light color, that it is almost white. The thin light orange-red (2.5YR 4/8) slip alternates with the white areas, forming patterns that resemble drops.

Forms

No forms were identified, although sherds could belong to a bowl form. Thickness of sides varies from .4 to .6 cm.

Inter and intra-site distribution:

Intra-site distribution:

The sherds were found in a midden (Zone 59) of Operation I.

Inter-site distribution

The sherds of this unnamed resist material are identical to the sherds found by Kidder in the Guatemala Highlands (D3c-2 65-1820 23515, D15 65-1820 23515, II-14 1820 23515 PSPA, Peabody Museum of Anthropology, Harvard University).

Illustration: No illustration provided.

Type	CHICAGO ORANGE
Variety	Chucun
Established	Cuello (Pring 1977a). Description at K'axob based on 7801 sherds, representing 70.19% of the total Chaakkax Ceramic Complex.
Ceramic Group	Chicago
Ware	Fort George Orange
Ceramic Complex	Chaakkax Early and Late Facets.
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes.

(1) During the Chaakkax Ceramic Complex, Chicago Orange: Chucun Variety has a thin reddish yellow (5YR 7/6) color, covering the exterior surfaces of the vessels. (2) The paste is fine and porous. (3) The predominant forms are basins or bowls with outcurved sides, tecomates or bowls with markedly incurved sides, and jars with an outcurved neck.

Paste, Temper, and Firing:

Paste is fine and porous, containing large particles of possible calcite. Black particles show on the surface. Some sherds present a dark gray (2.5YR 4/0) or very dark gray (2.5YR 4/0) core, measuring .6 cm in width.

Surface Finish or Decoration

The slip is very thin and has a lighter color (pink 7.5YR 7/4) than the Chucun Variety (reddish brown 5YR 5/4) of the K'atabche'kax Ceramic Complex. The color on most Chaakkax vessels is pink (7.5YR 7/4); although, there is a wide variation of surface color, due to firing and form (Figure 4.8). In all forms, the reddish yellow (5YR 7/6; 7.5YR 6/8) slip is present in the interior of rim. Fire clouding on the surface has a gray (5YR 5/1) or a dark gray (5YR 4/1) color. On a jar fragment, for example, the color varies from light brown (7.5YR 6/4); pink (7.5YR 7/4) to reddish yellow (5YR 7/6; 7.5YR 6/8).

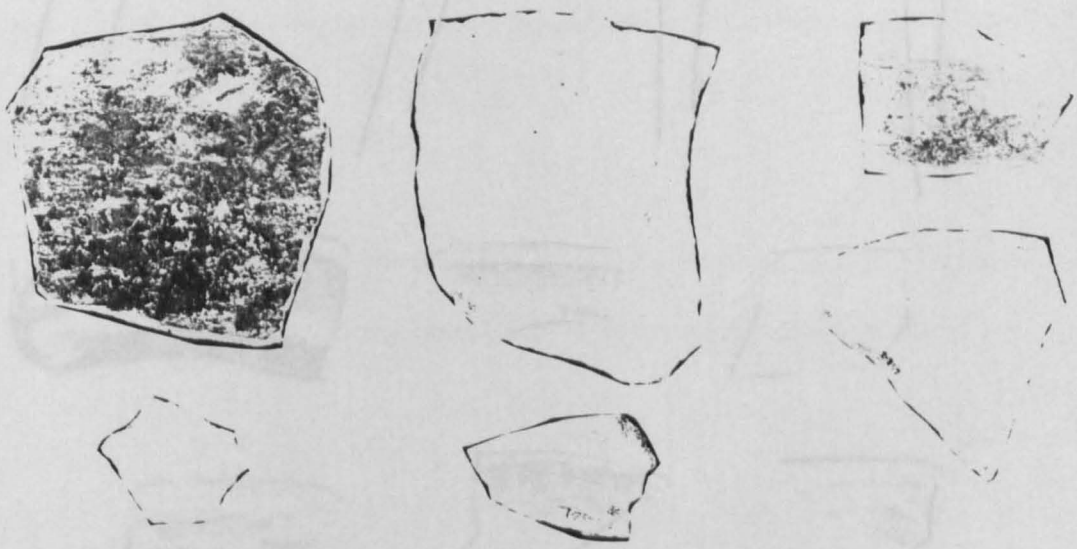


Figure 4.8 Surface Differentiation of Chaakkax Chicago Orange: Chucun Variety.

Forms of the Chaakkax Early Facet:

Basin Forms. The first form corresponds to a basin or bowl with outcurved sides, an everted rim and a beveled-in lip, that projects 3 cm to the exterior (Figure 4.9). The average diameter measures 24 cm. Thickness of vessels ranges from .6 to .8 cm. The second form is a basin or bowl with incurved-recurved sides and outcurved neck, everted rim and beveled-out lip. The average diameter measures 22 cm. Thickness of the vessels varies from .4 to .6 cm.

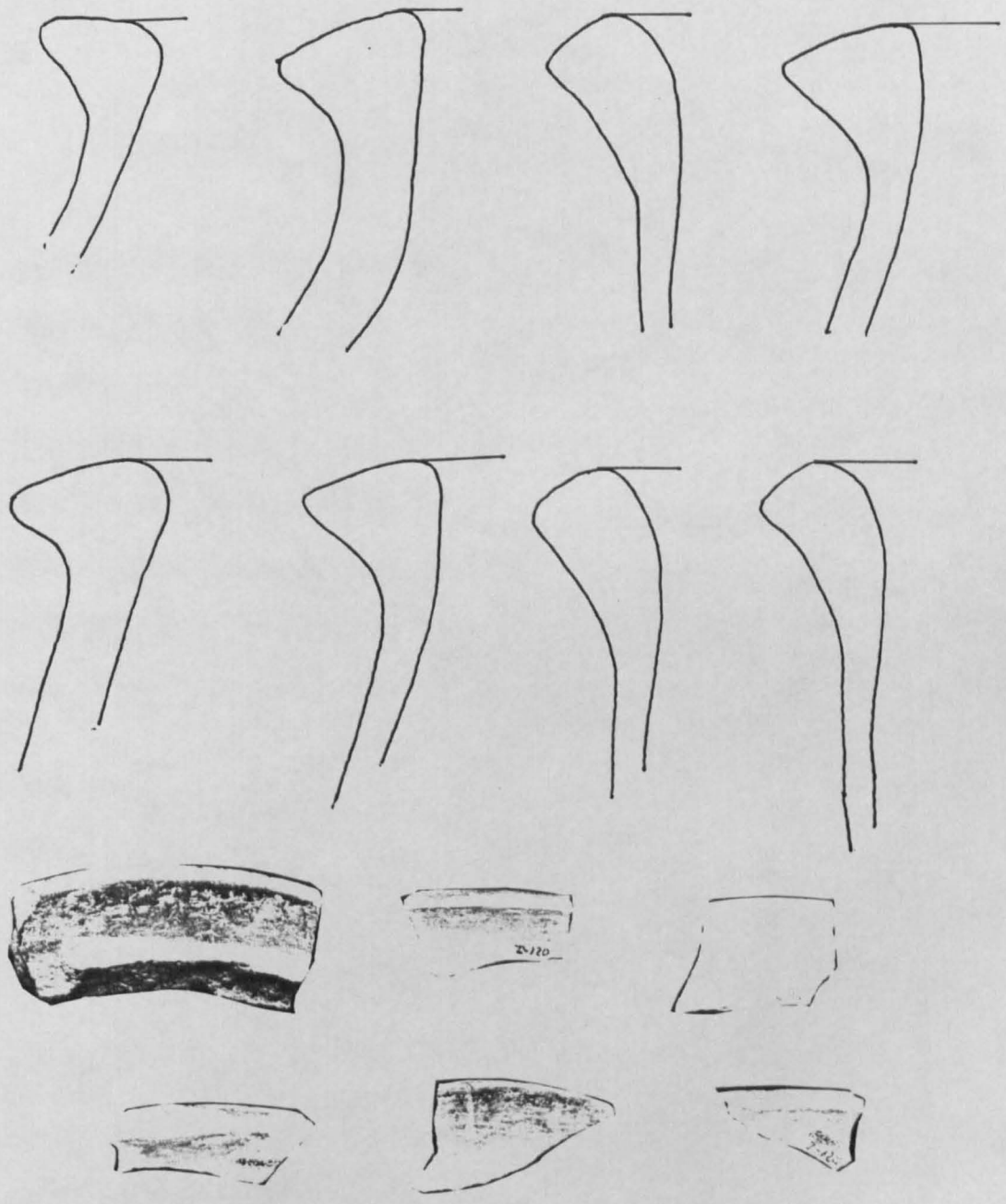


Figure 4.9 The Basins of Chaakkax Chicago Orange: Chucun Variety.

Tecomate Forms. Tecomates have markedly incurved sides and a restricted orifice, with an interior thickened rim (Figure 4.10). In these vessels, the diameter ranges from 6 to 8 cm. Tecomate walls are thick, measuring from .5 to .7 cm.

Figure 4.10 The Tecomate Forms of Chaakkax Chicago Orange: Chucun Variety.

Jar Forms. The jar form has an outcurved neck with a horizontal everted rim, extending 2 cm to the exterior (Figure 4.11). These jars usually present 16 cm in diameter. Thickness of jars measures from .6 to .8 cm. In the assemblage, there are also jars with an outcurved neck, which height is 2.9 cm. The rim is a direct with a rounded lip, measuring 12 cm in diameter. In these jars, the walls vary in thickness between .5 to 1 cm. The measurements of these jars could be restricted to the use of strap handles, as they are absent in the larger version of this form. The strap handles were made by curving three rolls of clay. These were applied to the surface of the vessel, from the rim to slightly below the neck juncture, as to give it support (Figure 4.11).

Inter and intra-site distribution:

Intra-site distribution:

Chicago Orange: Chucun Variety occurs on almost every context at K'axob, for example, on the paleosol, in most burials, in construction fills, in middens, pits, and sherd-lined pits.

Inter-site distribution

Cuello: *López Mamom* (Kosakowsky 1987a:52); Colha: *Chiwa* (Valdez 1987:92); Kichpanha: *Chiwa* (Reese and Valdez 1987:38).

Illustration: Figures 4.8-4.11

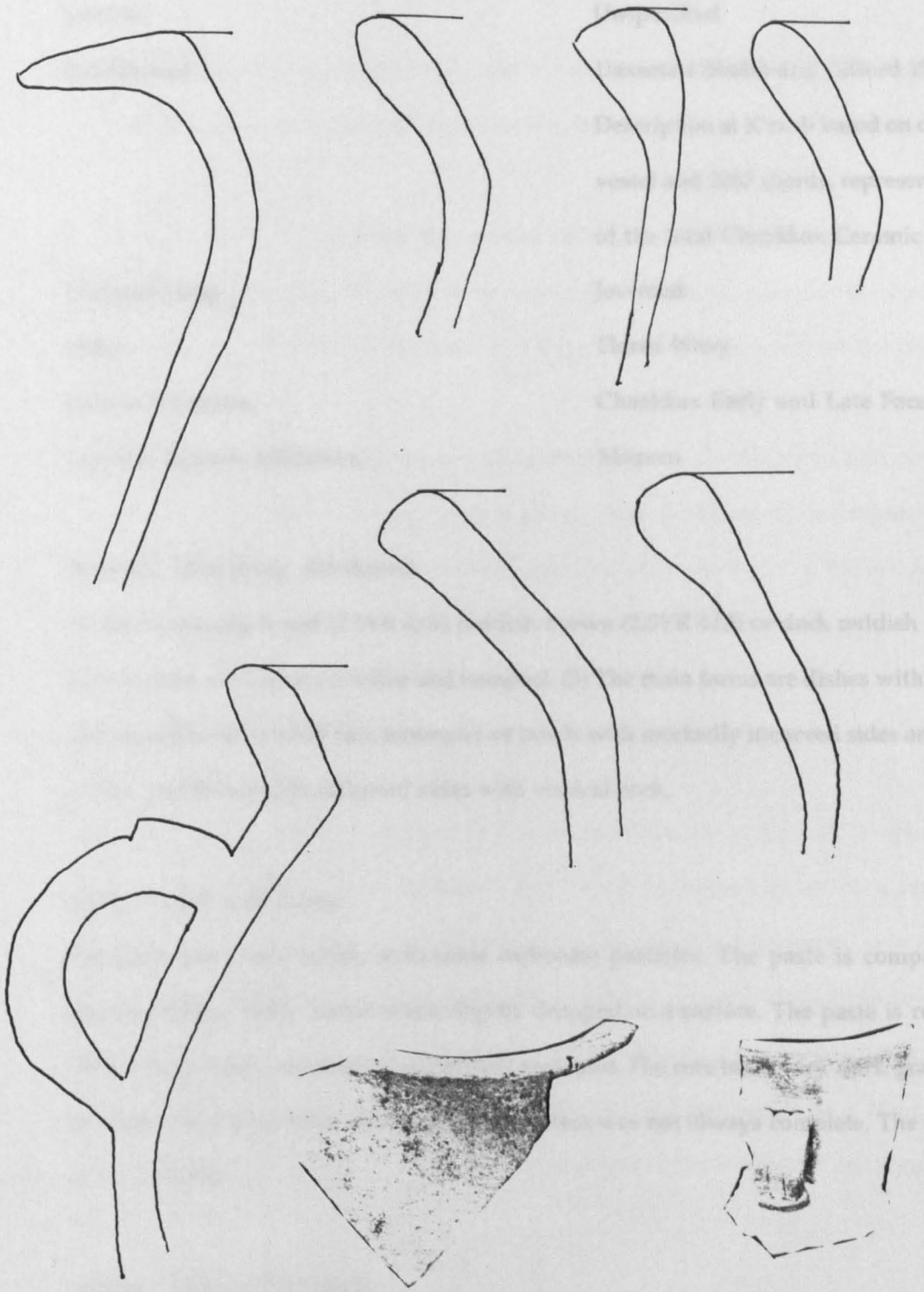


Figure 4.11 Rim Profiles and Sherds of the Mamom Chicago Orange: Chucun Variety Jars.

Type	JOVENTUD RED
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:170). Description at K'axob based on one complete vessel and 2087 sherds, representing 18.78% of the total Chaakkax Ceramic Complex.
Ceramic Group	Joventud
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early and Late Facets.
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes:

(1) The waxy slip is red (2.5YR 4/6) reddish brown (2.5YR 4/3) or dark reddish brown (2.5YR 3/3) in color. (2) The paste is fine and compact. (3) The main forms are dishes with flaring sides and an outflared-everted rim, tecomates or bowls with markedly incurved sides and a restricted orifice, and bowls with incurved sides with vertical neck.

Paste, Temper, and Firing:

The paste has a fine texture with some carbonate particles. The paste is compact and has a distinguishable "clink" sound when slightly dropped on a surface. The paste is reddish yellow (5YR 6/8) in color and a core occurs in most examples. The core has a very dark gray (7.5YR 3/0) or black (7.5YR 2/0) color, showing that oxidation was not always complete. The core measures .4 cm in width.

Surface Finish or Decoration

On most surfaces, color of the slip is red (2.5YR 4/6), reddish brown (2.5YR 4/3), or dark reddish brown (2.5YR 3/3). The slip was applied after smoothing of the surface and it was polished to give a lustrous finish. The slip tends to crackle very easily, in contrast to the red slip of Sierra Red group. Fire clouding occurs in a very dark gray (7.5YR 3/0) color. On some sherd examples the color ranges from dusky red (10R 3/4) to red (2.5YR 5/8), due to constant fire exposure.

Forms

Bowl Forms. Bowls with incurved sides and a vertical neck have a direct rim and rounded lip. The estimated diameter is 20 cm. Thickness of vessels is .7 cm.

Bowls with outcurved sides are also present having a diameter that varies from 28 to 42 cm (Figure 4.12:a). The rim is rounded or beveled-out and in some examples the rim curves to the exterior. Thickness of sides varies from .7 to .9 cm. Bases of these forms are flat (Figure 4.12:b).

Tecomate Forms. Tecomates or bowls with markedly incurved sides and a restricted orifice have a varying diameter from 3 to 10 cm (Figure 4.12c). Thickness of vessels varies from 4.5 to .7 cm, in this form. Differential firing occurs on one sherd, having a black (2.5YR 2.5/0) color.

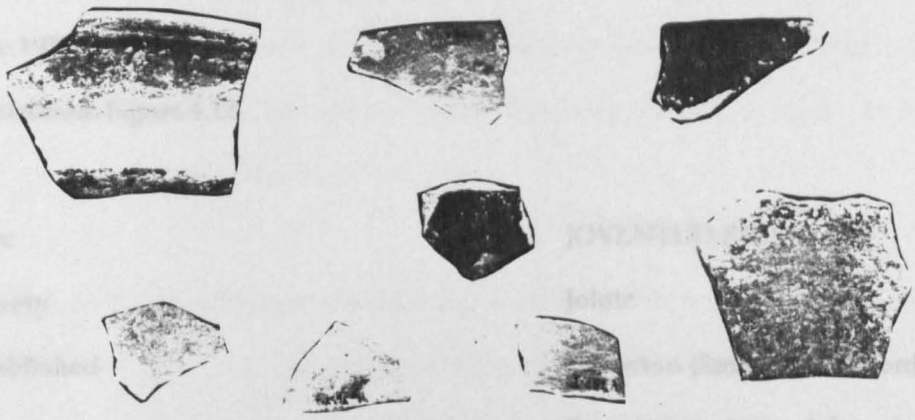
Inter and intra-site distribution:

Intra-site distribution:

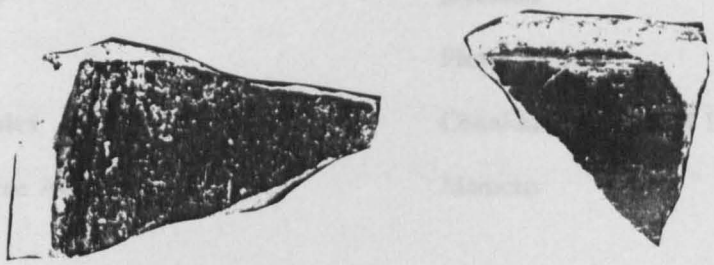
The Unspecified Variety of Joventud Red is very abundant at the site. It occurs in paleosol levels, burials, middens, pits, and sherd-lined pits of Operation I. A complete vessel was found in Burial 28 (Late Phase III E-Area Operation I I-270 Zone 13). The tecomate is decorated with pre-fired incisions that start after a circumferential line near the interior thickened rim. These lines run vertical to the base to give the effect of a squash. The exterior surfaces are slipped within Joventud Red, as well as the base. Differential firing occurs in a black (2.5YR 2.5/0) color. Diameter of the tecomate is 10 cm. Thickness of vessels is 4.5 cm. Total weight of vessel is 508 gr.

Inter-site distribution:

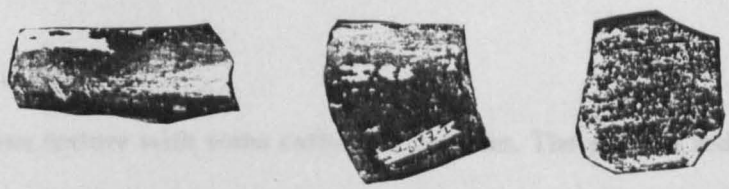
Altar de Sacrificios: *San Felix Late Phase* (Adams 1971:20); Barton Ramie: *Jenney Creek Late Phase* (1976:78); Becan: *Acachen* (Ball 1977a:17); Colha: *Chiwa* (Valdez 1987:82; 1988:43); Cuello: *López Mamom* (Kosakowsky 1987a:52); Chan Chen: *Aventura Middle Formative* (Ball 1983:204, 210, 213); Kichpanha: *Chiwa* (Reese and Valdez 1987:38); Komchen: *Early Nabanche*



A. Bowl Forms



B. Bases



C. Tecomate Forms

Figure 4.12 Some Sherd Examples of Joventud Red: Unspecified Variety .

(Andrews V 1988:52); El Mirador: *Monos* (Forsyth 1989:13); Mayapan: *Pre-Cepech* (Smith 1971:137); Seibal: *Escoba* (Sabloff 1975:61); Tayasal-Paxcaman zone: *Chunzalam* (Chase 1984:29); Tikal: *Eb* (Culbert 1993:5); Uaxactun: (Joventud Variety) Mamom (Gifford 1963:26); Yaxha-Sacnab: *Ah Pam Early Mamom/Yancotil Late Mamom / Late Mamom-Tzec-Yancotil* (Rice 1979:13, 22, 25).

Illustration: Figure 4.12

Type	JOVENTUD RED
Variety	Jolote
Established	Uaxactun (Smith and Gifford 1966:158). Description at K'axob based on 170 sherds, representing 1.53% of the total Chaakkax Ceramic Complex.
Ceramic Group	Joventud
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early and Late Facets.
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes:

(1) The waxy slip color is red (2.5YR 4/6). (2) The paste is fine and compact. (3) The main form corresponds to dishes with flaring walls.

Paste, Temper, and Firing:

The paste has a fine texture with some carbonate particles. The paste is reddish yellow (5YR 4/8) in color and a core occurs in most examples. The core has a very dark gray (7.5YR 3/0) or black (7.5YR 2/0) color, measuring .4 cm in width, showing that oxidation was not always complete.

Surface Finish or Decoration

The color of slip is red (2.5YR 4/6) or dark red (2.5YR 4/8). The slip covers both interior and exterior surfaces.

Forms

Dish Forms. Dishes with outcurved sides and an outflared-everted rim are very common in the sample. The dishes present a horizontal everted rim, curling almost in a rounded lip. Thickness of vessels varies from .5 to .8 cm and the diameter measures 22 cm. Dishes with flared sides, everted rim and rounded lip have a diameter that ranges from 32 to 38 cm. In the larger dishes, the thickness of walls varies from .5 to 7 cm.

Bowl Forms. Bowls with incurved sides and a vertical neck have a direct rim and rounded lip. Spouts occur in this from. The estimated diameter is 18 cm and the thickness of walls is .6 cm. A ridge occurs in the middle part of the vessel. The ridge is very similar to the ones that decorate the bowls in Abelino Red: Abelino Variety (Figure 4.13).

Inter and intra-site distribution:

Intra-site distribution:

The variety is present in the paleosol levels of Operation I and in a midden (Zone 63) of Phase I. It was also present in a midden (Zone 162), in a subfloor fill (Zone 219), and in Burial 26 (Phase IIa).

Inter-site distribution:

Altar de Sacrificios: *San Felix Late Phase* (Adams 1971:20); Becan *Acachen* (Ball 1977a:17).

Illustration: Figure 4.13.

Type	GUITARA INCISED
Variety	Guitara
Established	Uaxactun (Smith and Gifford 1966:170). Description at K'axob based on one complete vessel and 452 sherds, representing 4.07% of the total Chaakkax Ceramic Complex.

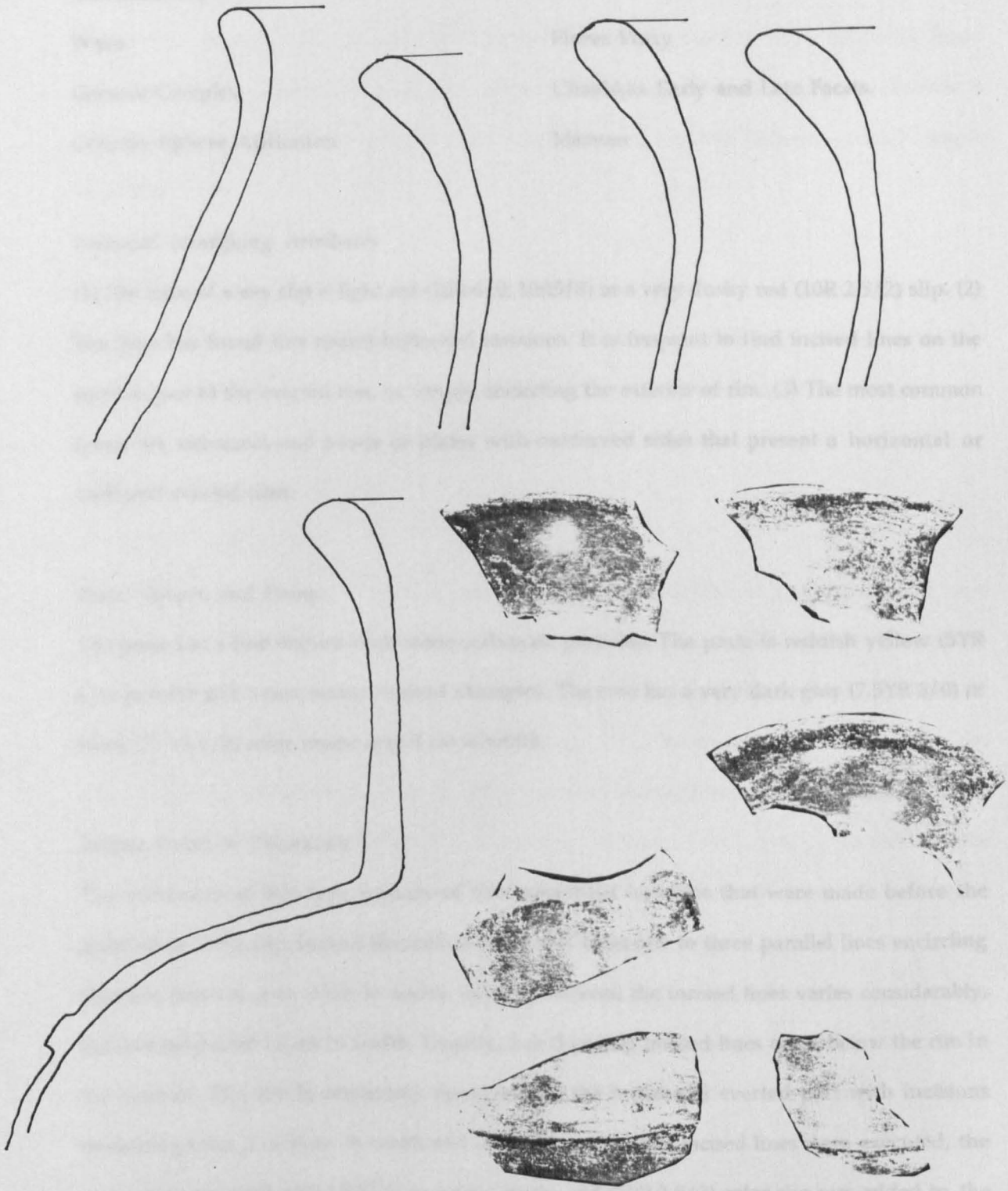


Figure 4.13 Rim Profiles and Sherd Examples of Joventud Red: Jolote Variety.

Ceramic Group	Joventud
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early and Late Facets.
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes

(1) The color of waxy slip is light red (10R 4/0; 10R5/8) or a very dusky red (10R 2.5/2) slip. (2) The type has broad line round-bottomed incisions. It is frequent to find incised lines on the interior part of the everted rim, or simply encircling the exterior of rim. (3) The most common forms are tecomates and bowls or plates with outcurved sides that present a horizontal or outflared everted rims.

Paste, Temper, and Firing:

The paste has a fine texture with some carbonate particles. The paste is reddish yellow (5YR 6/8) in color and a core occurs in most examples. The core has a very dark gray (7.5YR 3/0) or black (7.5YR 2/0) color, measuring .4 cm in width.

Surface Finish or Decoration

The decoration of this type consists of circumferential incisions that were made before the application of the slip. Incised decoration consists of from one to three parallel lines encircling the base, that are .2 to .3 cm in width. Spacing between the incised lines varies considerably, but does not exceed 1.4 cm in width. Usually, 2 or 3 preslip incised lines occur below the rim in the exterior. The rim is commonly decorated on the horizontal everted part with incisions measuring from .3 to .8 cm in width and .2 cm deep. Once the incised lines were executed, the waxy light red (10R 4/0; 10R5/8) or a very dusky red (10R 2.5/2) color slip was added to the surfaces. Fire clouding occurs in a black (2.5YR 2.5/0) color. On most tecomate forms preslip chamfering begins in the rim and continues down to the base, giving a clapboard effect. The chamfering lines measure in one sherd from .7 to 1.4 cm or from .2 to 1.4 cm.

Forms

Bowl Forms. The main forms correspond to bowls and dishes with outcurved sides, horizontal everted rim and rounded lip, measuring 32 cm in diameter (Figures 4.14 and 4.15). In this form, bowls can have an everted rim with a rounded lip. The base is flat; although, one example is slightly incurved. The diameter of base varies from 24 to 30 cm. The thickness of walls ranges from .7 to 1.4 cm.

Tecomate Forms. Bowls with markedly incurved sides and a restricted orifice have a varying diameter between 4 to 8 cm (Figure 4.16). One of the sherds for the tecomate form has a strap handle that measures 3 X 2.5 cm. Thickness of walls varies from .5 to .7 cm.

Inter and intra-site distribution:

Intra-site distribution:

Guitara Incised is present in most contexts, including the paleosol of Operation I. The type occurs in a midden (Phase I-Zone 63), in sherd-lined pits, and in construction fills. A complete bowl with outflared sides, an everted rim, and a rounded lip was found in Burial 28 (Phase III E-Area, Operation I I-270 Zone 137). In comparison with other vessels of the same type, the bowl was not skillfully made, as the modeled and incised bands traced before firing the vessel are not running perfectly horizontal. The central band measures 3 cm in width, the one near the base 1.6 cm in width and the one formed by the flaring of the rim and the central band measures .3 cm. The potter tried to make a perforation near the rim but was not successful as it was only achieved on the interior side. On the exterior side two perforations needed to be made to reach the interior one. The total diameter of vessel is 34 cm. The base is slightly rounded and is 32 cm in diameter. The total height is 8 cm. Thickness of sides is .6 cm. (No illustration provided)

Inter-site distribution:

Altar de Sacrificios: *San Felix Late Phase* (Adams 1971:42); Becan: *Acachen* (Ball 1977a:82); Caledonia: *Middle Formative* (Ball 1983:213); Colha: *Chiwa* (Valdez 1988:43); Cuello: Grooved-Incised Variety *Mamom* (Kosakowsky 1987a:43); El Mirador: *Monos* (Forsyth 1989:15); Komchen; *Early Nabanche* (Andrews V 1988: 52); Seibal: *Escoba* (Sabloff 1975:62); Tayasal-

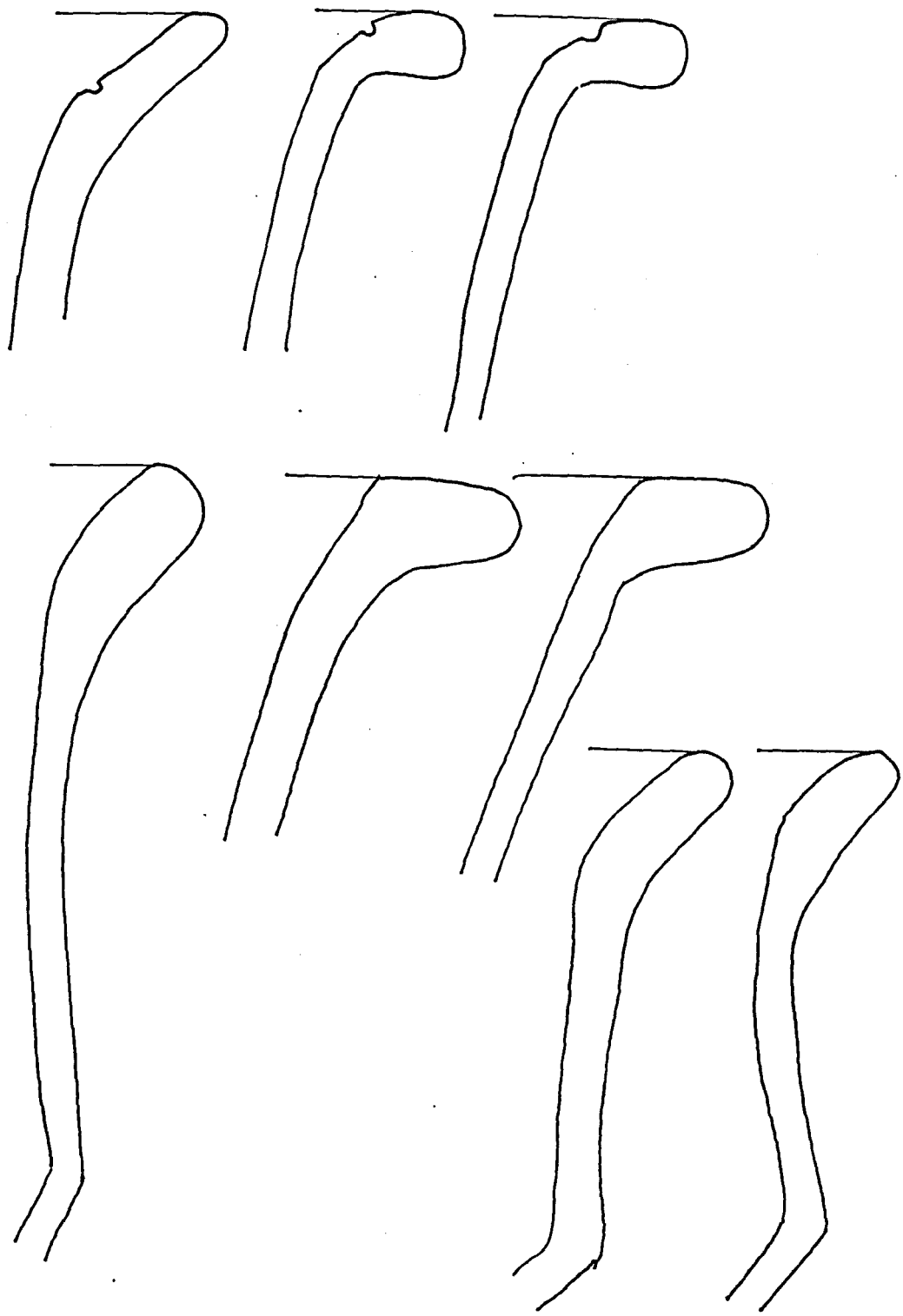


Figure 4.14 Rim Profiles of Guitara Incised: Guitara Variety.

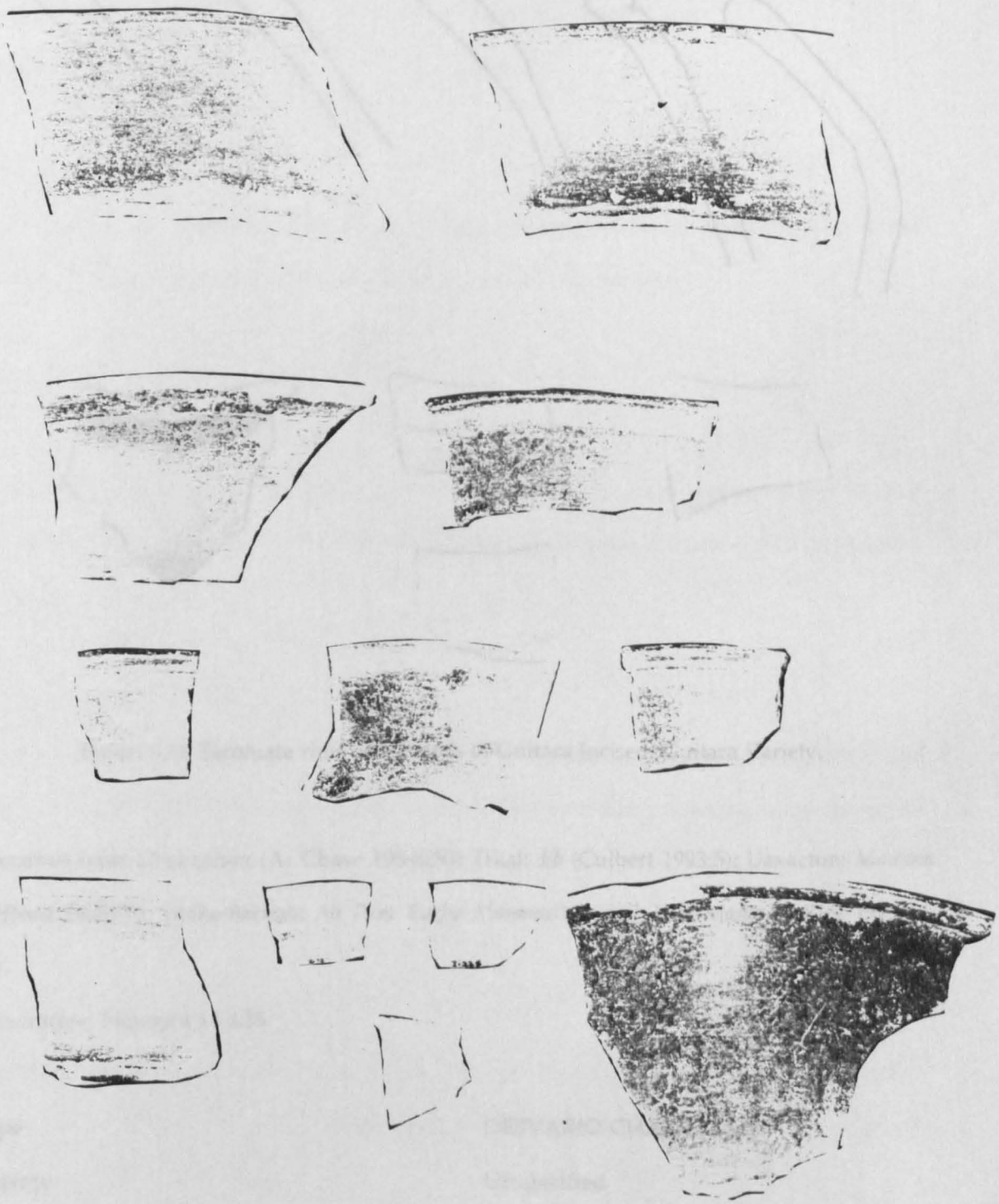


Figure 4.15 Sherd examples of Guitara Incised: Guitara Variety.

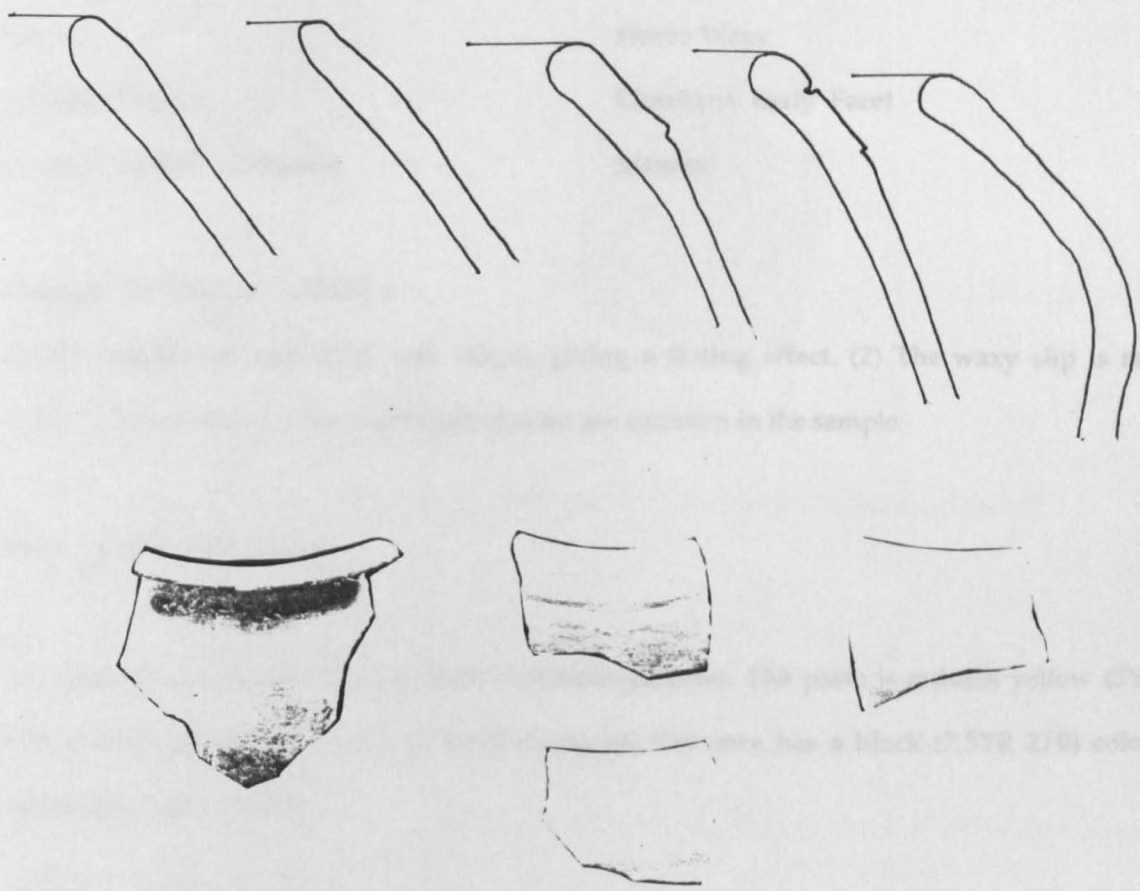


Figure 4.16 Tecomate rims and sherds of Guitara Incised: Guitara Variety.

Paxcaman zone: *Chunzalam* (A. Chase 1984:29); Tikal: *Eb* (Culbert 1993:5); Uaxactun: *Mamom* (Gifford 1963:26); Yaxha-Sacnab: *Ah Pam Early Mamom/Yancotil Late Mamom* (Rice 1979:13, 22).

Illustration: Figures 4.14-4.16

Type	DESVARIO CHAMFERED
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:156)
	Description at K'axob based on two sherds,

	representing 01% of the total Chaakkax Ceramic Complex.
Ceramic Group	Joventud
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early Facet
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes:

(1) The vessels are decorated with ridges, giving a fluting effect. (2) The waxy slip is red (2.5YR 4/6) in color. (3) Bowls with flared sides are common in the sample

Paste, Temper, and Firing:

The paste has a fine texture with some carbonate particles. The paste is reddish yellow (5YR 6/8) in color and a core occurs in most examples. The core has a black (7.5YR 2/0) color, measuring .2 cm in width.

Surface Finish or Decoration

On most surfaces the color of the slip is red (2.5YR 4/6). The surfaces appear well smoothed and even. The slip tends to crackle very easily, that is a distinctive characteristic of the Joventud Group. The vessel was decorated with ridges that resembles to those of the Muxanal Red-on-Cream: Unspecified Variety.

Forms

Bowl Forms. The only identified form is a bowl with flared sides (Figure 4.17). The rim is exterior thickened with a rounded lip, curling slightly. Diameter of the vessel is 20 cm. Thickness of the vessel is .7 cm.

Inter and intra-site distribution:

Intra-site distribution:

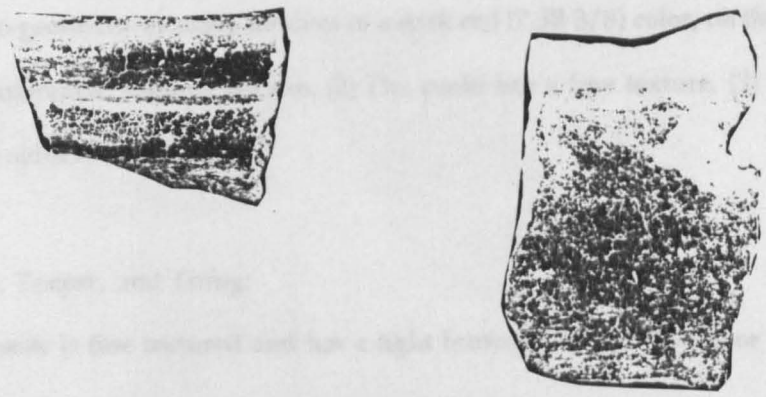


Figure 4.17 Sherd Examples of Desvario Chamfered: Unspecified Variety.

The sherds were found in the fill contents of Burial 11 (Structure 93).

Inter-site distribution

Altar de Sacrificios: *San Felix* (Adams 1971:46); Seibal: *Escoba* (Sabloff 1975:62); Uaxactun (Smith and Gifford 1966:156).

Illustration: Figure 4.17

Type	MUXANAL RED-ON-CREAM
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966: 170). Description at K'axob based on 195 sherds, representing 175% of the total Chaakkax Ceramic Complex.
Ceramic Group	Pital?
Ware	Flores Waxy
Ceramic Complex	Chaakkax Early and Late Facets.
Ceramic Sphere Affiliation	Mamom

Principal Identifying Attributes

(1) The main characteristic of this type is a white slip (10YR 8/2) that serves as a primary base to geometric or wavy motives in a dark red (7.5R 3/8) color, on the exterior of vessel or in a circumferential band on the rim. (2) The paste has a fine texture. (3) Dishes with outcurved or flared sides are common.

Paste, Temper, and Firing:

The paste is fine textured and has a light brown gray (10YR 7/2) or light brownish gray (10YR 6/2) color.

Surface Finish or Decoration

The decoration of this type is highly distinct as it is marked by dichrome colors. The white slip (10YR 8/2) acts as a primary base to the red (7.5R 3/8) geometric decoration, on the exterior surface. The most common patterns are wavy designs, parallel dark red (7.5R 3/8) lines or squares in a dark red (7.5R 3/8) color; painted on this white slip (Figure 4.18). Preslip incised circumferential lines occur near the rim on the exterior, or on the horizontal everted rims and even as incised lines near the base that are very similar to those of Guitara Incised: Guitara Variety. The interior was slipped in a red (10R 4/8) color. Fire clouding occurs on some sherds in a very dark gray (2.5YR 3/0) color.

Forms

Bowl Forms. Bowls with flared or outcurved sides, horizontal everted rim, and a rounded lip, have 32 cm in diameter (Figure 4.20). Lips are markedly pointed in some examples. Usually this form has a flat base that measures 28 cm in diameter. Thickness of walls is 1 cm. Another common bowl has outcurved sides with an everted rim and rounded lip or a beveled-out rim and rounded lip. The estimated diameter in this form is 40 cm. The thickness of walls in most dishes is .8 cm. It is interesting that some sherds had perforations.

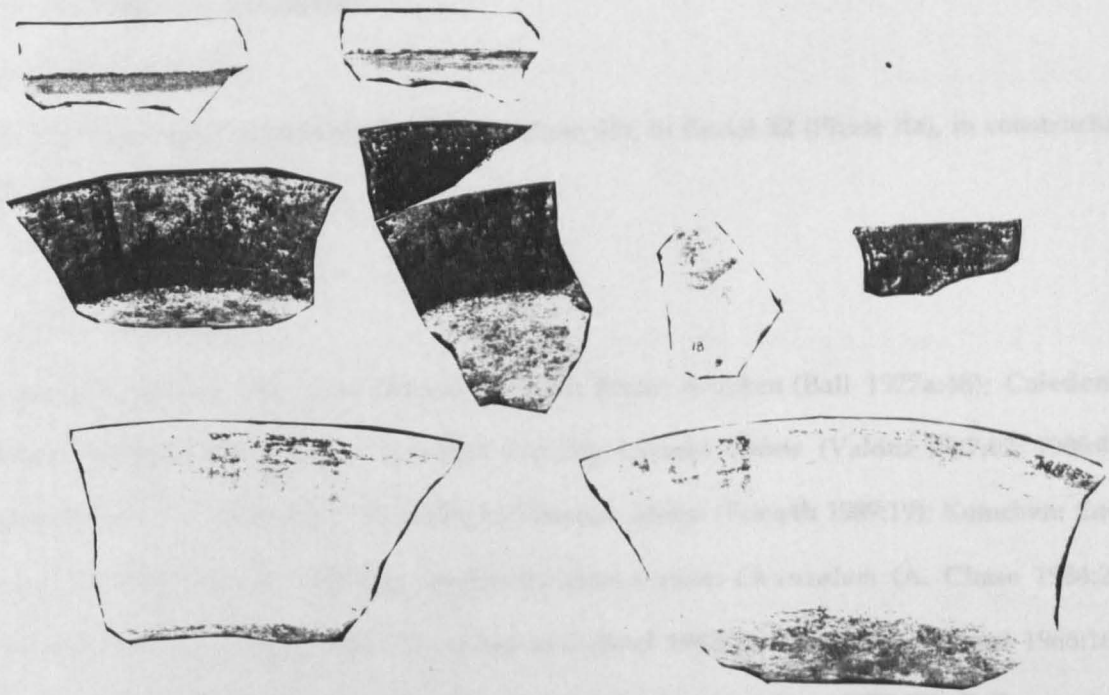


Figure 4.18 Decoration on Sherd Examples of Muxanal Red-on-Cream: Unspecified Variety.

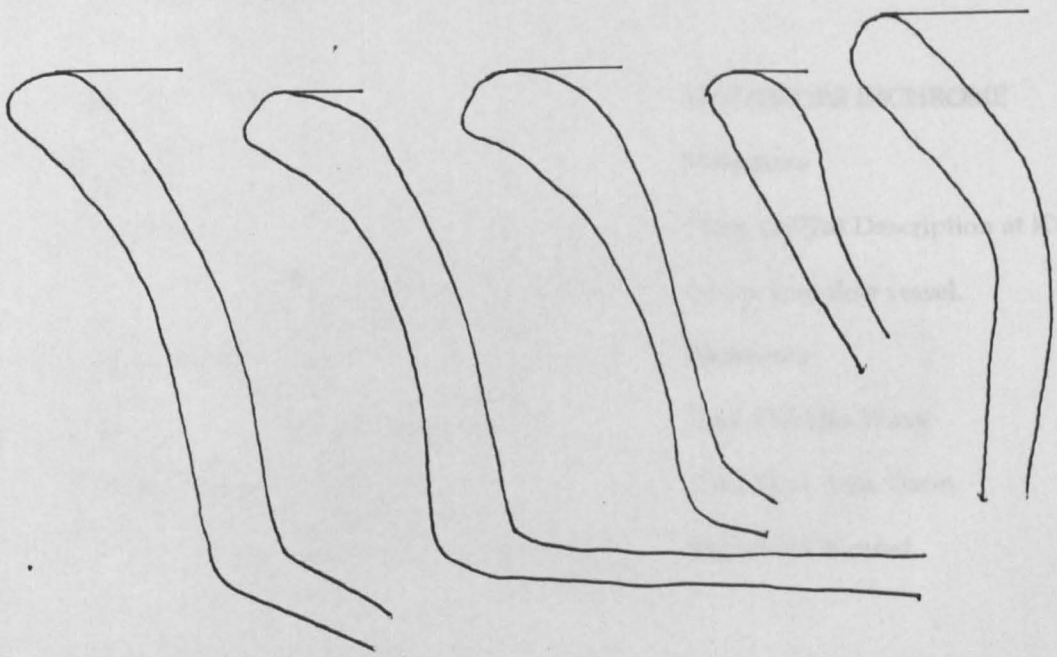


Figure 4.19 Rim Profiles of Muxanal Red-on-Cream: Unspecified Variety Bowls.

Inter and intra-site distribution:

Intra-site distribution:

The type is present in a midden (Operation I-Zone 63), in Burial 42 (Phase IIa), in construction fill, and in a midden (Zone 59).

Inter-site distribution:

Altar de Sacrificios: *San Felix* (Adams 1971:27); Becan: *Acachen* (Ball 1977a:48); Caledonia: Middle Formative (Ball 1983:213); Colha: (Variety Lazaro) *Chiwa* (Valdez 1987:92; 1988:44); Cuello: *Mamom* (Kosakowsky 1987a:49); El Mirador: *Monos* (Forsyth 1989:19); Komchen: *Early Nabanche* (Andrews V. 1988:52); Tayasal-Paxcaman zone: *Chunzalam* (A. Chase 1984:29); Uaxactun: *Mamom* (Smith 1955:Figure 14a 1; Gifford 1963:26; Smith and Gifford 1966:161); Yaxha-Sacnab: *Ah Pam Early Mamom/Yancotil Late Mamom* (Rice 1979:22). Ball reports to have observed Muxanal at Dzibilchaltun.

Illustration: Figures 4.18-4.19

Type	MATAMORE DICHROME
Variety	Matamore
Established	Pring (1977a) Description at K'axob based on one complete vessel.
Ceramic Group	Matamore
Ware	Paso Caballo Waxy
Ceramic Complex	Chaakkax Late Facet
Ceramic Sphere Affiliation	Mamom-Chicanel

Principal Identifying Attributes:

(1) The basic characteristic of this type relies on different color areas applied to a vessel, for example, the vessel found at K'axob is half red and half cream. (2) The paste has a medium texture. (3) The correspondent form is a bowl with incurved sides.

Paste, Temper, and Firing:

The paste has a medium texture and a yellowish red (5YR 5/6) color. In some sherds, the formed core has a dark gray (2.5YR 4/0) color and .5 cm in width.

Surface Finish or Decoration

Half of the vessel was painted red (2.5YR 4/8) and the other half in a cream (7.5YR 4/8) color. Differential firing occurs at a very dark gray (2.5YR 3/0) color.

Forms

Bowl Forms. The bowl has incurved sides, restricted orifice, and a flat base. The form is closely related to Mamom forms. The rim, specially, has a pre-fired incision, resembling tecomate rims. Diameter of vessel is 13 cm. the vessel has a weight of 840 gr. The base is flat and measures 8.5 cm in diameter.

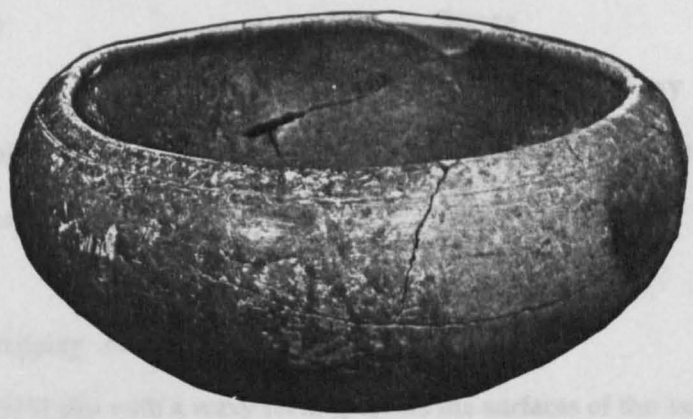


Figure 4.20 The Matamore Dichrome: Matamore Variety Vessel.

Inter and intra-site distribution:

Intra-site distribution:

The bowl with incurved sides was found in Burial 30 of Operation I (Phase III E-Area I-312 Zone 143).

Inter-site distribution:

Cuello: *Cocos* (Kosakowsky 1987a:79); Cerros: C'oh Complex (Robertson 1986:91); Colha: *Blossom Bank* (Valdez 1987:145); Kichpanha: *Blossom Bank* (Reese and Valdez 1987:39).

Illustration: Figure 4.20

Type	SIERRA RED
Variety	Sierra
Established	Uaxactun (Smith and Gifford 1966:163) Description at K'axob for the Late Facet of the Chaakkax Ceramic Complex based on one complete vessel.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	Chaakkax Late Facet
Ceramic Sphere Affiliation	Mamom-Chicanel

Principal Identifying Attributes:

1) A red (10R 5/8) slip with a waxy feeling covers the surfaces of the vessels. (2) The paste has a fine texture. (3) The bowl has flared sides.

Paste, Temper, and Firing:

The paste in this bowl is fine, although granular, and with a red (2.5YR 5/8; 2.5YR 4/6) color. The paste is compact and tends to crumble, which is a distinctive characteristic of Sierra Red in the Peten and in Yucatan. The paste presents a core measuring from .3 to .5 cm in width.

Surface Finish or Decoration

The red (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6) overall slip is present on both surfaces. The predominant color on the exterior is red (10R 4/6). Fire clouding is very common, obscuring the red slip into a light yellowish brown (10YR 4/6). The vessel presents two wavy lines on one side of the vessel, running from the bottom to the rim. The wavy lines recall the resist treatment; however, the lines were probably made with differential firing, rather than with the resist technique.

Forms

Bowl Forms. Flared sides bowls have an everted rim and almost horizontal and rounded lip. The base is slightly incurved (Figure 4.17). The form and decoration of the bowl is closely related to Mamom traditions. Height of vessel is 5.5 cm and the diameter is 31.2 cm. Diameter of base is 21.5 cm. Thickness of vessel varies from .4 to .6 cm. The total weight is 1, 572 gr.

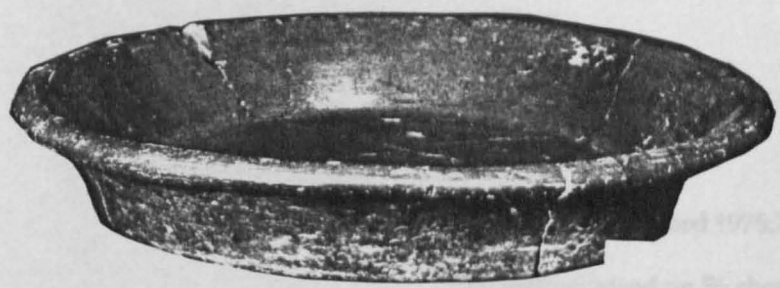


Figure 4.21 The Sierra Red: Sierra Variety Vessel found in Burial 30.

Inter and intra-site distribution:

Intra-site distribution:

The bowl was found in Burial 30 of Operation I (Phase III-W area I-312 Zone 143).

Inter-site distribution:

Altar de Sacrificios: *Chicanel* (Adams 1971:21); Becan: *Pakluum Chicanel Complex* (Ball 1972:35; Ball 1977a:18); Cerros: *Ixtabai* (Robertson and Freidel 1982:67; Robertson 1986:97); Colha: *Onecimo and Blossom Bank* (Valdez 1987:27; 1988:44-45); Cuello: *Cocos* (Kosakowsky 1987a:58); Chan Chen, Patchchacan: *Aventura Late and Terminal Formative* (Ball 1983:205, 209, 210, 213); Edzna: *Baluartes* (Forsyth 1983); Kichpanha: *Blossom Bank* (Reese and Valdez 1987:39); Komchen: *Late Nabanche/Xculul* (Andrews V 1988:53); Mayapan: *Chicanel* (Smith 1971:138); Mirador: *Cascabel -Late Preclassic* (Forsyth 1986:21); Moho Cay: *Late Terminal Formative* (Ball 1982:50); Santa Rita: *Late Preclassic* (A. Chase and D. Chase 1987:51); Tayasal-Paxcaman *Kax-Chicanel* (A. Chase 1984:29); Uaxactun *Chicanel* (Gifford 1963:27).

Illustration: Figure 4.21

III.- DESCRIPTION OF THE TYPES AND VARIETIES OF THE K'ATABCHE'KAX CERAMIC COMPLEX: THE LATE FORMATIVE PERIOD

Type	BLACK ROCK RED
Variety	Black Rock
Established	Barton Ramie (Gifford 1976:79). Description based on 56 sherds, representing 0.19% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Joventud
Ware	Flores Waxy
Ceramic Complex	K'atabche'kax Early Facet
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) The color of the waxy slip is light red (10R 4/0; 10R5/8) or a very dusky red (10R 2.5/2) slip. (2) The most common form is a bowl with rounded sides. (3) The paste has a medium texture.

Paste, Temper and Firing:

The paste has a medium texture with some carbonate particles. The paste is reddish yellow (5YR 6/8) in color.

Surface Finish or Decoration:

The waxy light red (10R 4/0; 10R5/8) or a very dusky red (10R 2.5/2) color slip was added to the surfaces. Fire clouding occurs in a black (2.5YR 2.5/0) color.

Forms:

Bowl Forms. The main form is a bowl with rounded sides. No rims were found to determine a diameter measurement. The walls are very thin varying from .4 to .5 cm. The thickness of sides is very similar to Hillbank Red: Hillbank Variety.

Inter and Intra-site distribution:

Intra-site distribution:

It is present only in a pit of Operation XI (Zone 28). It appeared associated to Chicago Orange: Chucun Variety and Sierra Red: Sierra Variety sherds.

Inter-site distribution:

Barton Ramie: *Jenney Creek Late Facet* (Gifford 1976:79).

Illustration: No illustration provided.

Type	MUXANAL RED-ON-CREAM
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:170). Description at K´axob based on 121 sherds, representing 0.41% of the K'atabche'kax Ceramic Complex.
Ceramic Group	Muxanal
Ware	Flores Waxy?
Ceramic Complex	K'atabche'kax Early and Late Facet
Ceramic Sphere Affiliation	Mamom-Chicanel

Principal Identifying Attributes:

(1) Muxanal Red-on-Cream: Unspecified Variety is characterized by a white slip (10YR 8/2) that serves as a primary base to geometric or wavy motives in a dark red (7.5R 3/8) decoration on the exterior of vessels. (2) The paste has a fine texture. (3) Bowl with flared sides continue into K'atabche'kax times.

Paste, Temper and Firing:

The paste is fine textured and has a light brown gray (10YR 7/2) or light brownish gray (10YR 6/2) color.

Surface Finish or Decoration:

The white slip (10YR 8/2) was applied as a primary base to exterior decoration. Most common patterns are wavy designs and parallel dark red (7.5R 3/8) lines, painted on this white slip. Pre-fired incised lines occur near the rim, on the exterior of vessels. Bowls with a horizontal everted rim are decorated with incised lines near the base of the vessels. The interior of vessel is generally red (10R 4/8). Fire clouding occurs on many sherds in a very dark gray (2.5YR 3/0) color.

Forms:

Bowl Forms. The common form is a bowl with flared sides, everted rim and a rounded lip. The diameter in this form measures 40 cm. Thickness of walls varies from .8 to 1 cm.

Inter and Intra-site distribution:

Intra-site distribution:

The Muxanal Red-on-Cream: Unspecified Variety was present in Operation I, Operation XI and Operation XIII. In Operation I, it appeared in middens (Zones 87, 111, 51); in Burials 19, 29 30; in floors (Zones 95, 122); and in fill contents (Zones 128, 130 and 124). The type occurs in the Late K'atabche'kax levels of Operation XII, for example, in a midden (Zone 10) and on a plaster surface (Zone 46). In the Early K'atabche'kax levels of Operation XII, the type is present in sherd-lined pits (Zones 19 and 21).

Inter-site distribution:

Altar de Sacrificios: *San Felix* (Adams 1971:27); Becan: *Acachen* (Ball 1977a:48); Caledonia: *Middle Formative* (Ball 1983:213); Colha: Variety Lazaro *Chiwa* (Valdez 1987:92; 1988:44); Cuello: *López Mamom* (Kosakowsky 1987a:49); El Mirador: *Monos* (Forsyth 1989:19); Komchen: *Early Nabanche* (Andrews V 1988:52); Tayasal-Paxcaman zone: *Chunzalam* (A. Chase 1984:29); Uaxactun: *Mamom* (Smith 1955:Figure 14a1; Gifford 1963:26; Smith and Gifford 1966:161; Ball reports to have observed Muxanal at Dzibilchaltun); Yaxha-Sacnab: *Ah Pam Early Mamom/Yancotil Late Mamom* (Rice 1979:22).

Illustration: Figure 4.18-4.19

Type	GUITARA INCISED
Variety	Guitara
Established	Uaxactun (Smith and Gifford 1966:170). Description based on 103 sherds, representing 0.35% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Joventud

Ware	Flores Waxy
Ceramic Complex	K'atabche'kax Early and Late Facet
Ceramic Sphere Affiliation	Mamom-Chicanel

Principal Identifying Attributes:

(1) Surfaces are covered with a light red (10R 4/0; 10R 5/8) slip. (2) Guitara Incised: Guitara Variety has broad line incisions and incised-line decoration on the interior side of everted rims, or the exterior side of rims. (3) The most common form is a bowl with outcurved sides and an outflared everted rim.

Paste, Temper and Firing:

The paste has a fine compact texture and contains probable carbonate particles. The color of the paste is reddish yellow (5YR 6/8). The core has a width of .4 cm and has a very dark gray (7.5YR 3/0) or black (7.5YR 2/0) color.

Surface Finish or Decoration:

The sherds are covered with a light red (10R 4/0; 10R 5/8) slip. Pre-fired circumferential broad lines occur as round bottom incisions that are .2 to .3 cm in width. Incised lines decorate the interior of everted rim or the exterior of rims.

Forms:

Bowl Forms. Bowls with outcurved sides and a probable horizontal everted rim with a rounded lip are present in the K'atabche'kax sample. Thickness of vessels ranges from .7 to 1.4 cm. Possibly, two rims (I-341 and I-353) with a diameter of 10 and 6 cm belong to a "florero" form.

Inter and Intra-site distribution:

Intra-site distribution:

Guitara Incised: Guitara Variety is present in the Early K'atabche'kax levels of Operation I. It is part of midden contents (Zones 87, 111, 51, 141); Burials 19, 25, 29, 32, and 24; fills (Zones 124, 53). It appeared also on floors (Zones 47, 95, 126, 134, 138) and in a sherd-lined pit (Zone 151). Guitara

Incised: Guitara Variety has been found as part of fill constructions of the Chicanel Terminal Facet in Operation XI and Operation XIII. In Operation XIII, the type occurred in a sherd-lined pit (Zone 44), in a midden (Zone 10), and on plaster surfaces (Zones 46 and 54).

Inter-site distribution:

Altar de Sacrificios: *San Felix Late Facet* (Adams 1971:42); Becan: *Acachen* (Ball 1977a:82); Caledonia: *Middle Formative* (Ball 1983:213); Colha: *Chiwa* (Valdez 1988:43); Cuello: *Mamom* (Kosakowsky 1987a:43); El Mirador: *Monos* (Forsyth 1989:15); Komchen: *Early Nabanche* (Andrews V 1988:52); Seibal: *Escoba* (Sabloff 1975:62); Tayasal-Paxcaman zone: *Chunzalam* (A. Chase 1984:29); Uaxactun: *Mamom* (Gifford 1963:26); Yaxha-Sacnab: *Ah Pam Early Mamom/Yancotil Late Mamom* (Rice 1979:13, 22).

Illustration: Figures 4.14-4.16

Type	GUITARA INCISED
Variety	Pollo Desnudo
Established	Altar de Sacrificios (Adams 1971:42). Description at K'axob based on one partially complete vessel.
Ceramic Group	Joventud
Ware	Flores Waxy
Ceramic Complex	K'atabche'kax Early Facet
Ceramic Sphere Affiliation	Mamom-Chicanel

Principal Identifying Attributes:

(1) Surfaces are covered with a light red (10R 4/0; 10R 5/8) slip. (2) The vessel has broad line round-bottomed incisions and incised line decoration on interior of the outflared everted rim. (3) The main form corresponds to bowls with outcurved sides and an outflared everted rim.

Paste, Temper and Firing:

The paste has a fine compact texture and contains probable carbonate particles. The color of the paste is reddish yellow (5YR 6/8). The core has a width of .4 cm and has a very dark gray (7.5YR 3/0) or black (7.5YR 2/0) color.

Surface Finish or Decoration:

The sherds are covered with a light red (10R 4/0; 10R 5/8) slip. The decoration consists of incised lines near the rim, forming half circles (Figure 4.21). The half circles vary in diameter from 4 to 5.5 cm. The half circles vary in diameter from 4 to 5.5 cm and it is similar to the unusual decoration reported for this variety by Adams (1971:Figure 9u) at the site of Altar de Sacrificios.

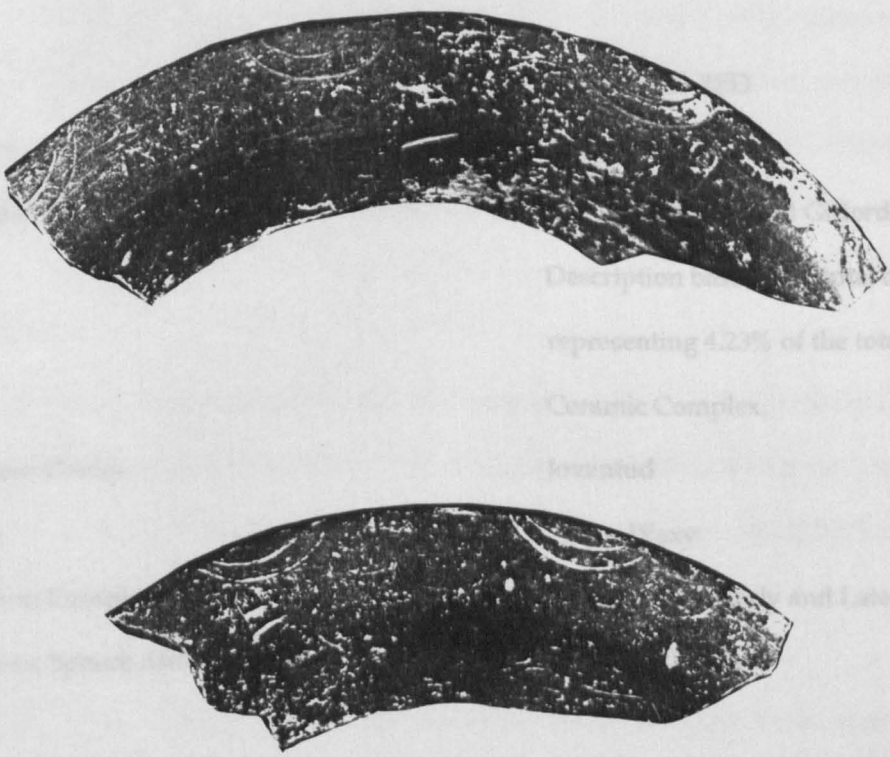


Figure 4.22 The Partially Complete Vessel of Guitara Incised: Pollo Desnudo Variety.

Forms:

Bowl Forms. Bowls have outflared sides everted rim with a rounded lip. The rim on the partially complete vessel everts 3 cm. Bowls have 32 cm in diameter. Thickness of vessel varies from .5 to .1 cm. The weight of the partially complete vessel is 694 gr. The total height of this vessel is 6 cm.

Inter and Intra-site distribution:

Intra-site distribution:

The partially complete bowl was found in Operation I (Phase VII-E. I-240 Zone 118).

Inter-site distribution:

Altar de Sacrificios: *Flores Waxy* (Adams 1971:42) and Becan: *Acachen* (Ball 1977a:82).

Illustration: Figure 4.22

Type	JOVENTUD RED
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:170). Description based on a total of 1243 sherds, representing 4.23% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Joventud
Ware	Flores Waxy
Ceramic Complex	K'atabche'kax Early and Late Facet
Ceramic Sphere Affiliation	Mamom-Chicanel

Principal Identifying Attributes:

(1) The slip maintains its red (2.5YR 4/6) reddish brown (2.5YR 4/3) or dark reddish brown (2.5YR 3/3) color. (2) The most common forms are bowls with incurved-recurved sides and jars with outcurved neck.

Paste, Temper and Firing:

The differences between Joventud Red: Unspecified Variety and Sierra Red: Sierra Variety are well marked at K'axob. The paste of Joventud Ceramic Group has a finer texture than the Sierra Ceramic Group; although, it also contains carbonate particles. The paste of Joventud Ceramic Group is more compact and has a redder (reddish yellow 5YR 6/8) color, in comparison to the Sierra Group. Probably, and due to compactness of the paste, a sherd from the Joventud Ceramic Group makes a distinguishable "clink" sound, when slightly dropped on a surface. The compactness helps to obtain sherds with a sharp angle. The core of Joventud Red: Unspecified Variety has a width of .4 cm and a very dark gray (7.5YR 3/0) or black (7.5YR 2/0) color.

Surface Finish or Decoration:

The main color of Joventud Red: Unspecified Variety is red (2.5YR 4/6), reddish brown (2.5YR 4/3), or dark reddish brown (2.5YR 3/3). Due to fire exposure, color ranges within dusky red (10R 3/4), but also red (2.5YR 5/8). Fire clouding occurs in a very dark gray black color (7.5YR 3/0). Another difference between Joventud Ceramic Group and the Sierra Group is the ease with which Joventud Red: Unspecified Variety slip crackles.

Forms:

Bowl Forms. Bowl with incurved sides and outflared neck are still a preferred form. These bowls have a ranging diameter from 20 to 22 cm. Thickness of vessels is .5 to .8 cm. Thickness of walls is .7 cm. One bowl with incurved sides, outflared neck and rounded lip has a spout with a restricted orifice and a beveled-out rim.

Tecomate Forms. Tecomates are still part of the ceramic sample. Tecomates still preserve the same measurements as in Chaakkax times. One complete vessel was decorated with preslip gadrooning, beginning after a circumferential line, near the interior thickened rim. The gadrooning runs vertically to the base, giving a squash effect. The slip is present on the exterior surface, as well as the base. Total weight of the vessel is 508 gr.

Jar Forms. Jars have an outcurved neck and a diameter of 8 to 12 cm. Very fragmented handles were also present in the sample, that could probably belong to these jars.

Inter and Intra-site distribution:

Intra-site distribution:

Joventud Red: Unspecified Variety is present in Operation I, as part of midden contents (Zones 87, 111, 51, 141); Burials (19, 25, 29, 34, 30, 32, 27); pits (Zone 120, 133, 114, 119); and fills (Zones 128, 130, 124, 53). Joventud Red: Unspecified Variety also occurred on floors (Zone 47, 95, 104, 126, 122, 152) and in a sherd-lined pit (Zone 151). The type restricts to Early K'atabche'kax levels, but it was found as part of fill constructions of Terminal Chicanel Facet in Operation XI and Operation XIII. Joventud Red: Unspecified Variety occurs in various contexts of this structure, for example, in a sherd-lined pit (Zone 44), in a midden (Zone 10), and on a plaster floor (Zone 56).

Inter-site distribution:

Altar de Sacrificios: *San Felix Late Facet* (Adams 1971:20); Barton Ramie: *Jenney Creek Late Facet* (Gifford 1976:78); Becan: *Acachen* (Ball 1977a:17); Colha: Chiwa (Valdez 1987:82; 1988:43); Cuello: *Mamom* (Kosakowsky 1987a:52); Chan Chen: *Aventura* Middle Formative (Ball 1983:204, 210, 213); Kichpanha: *Chiwa* (Reese and Valdez 1987:38); Komchen: *Early Nabanche* (Andrews V 1988:52); El Mirador: *Monos* (Forsyth 1989:13); Mayapan: *Pre-Cepech* (Smith 1971:137); Seibal: *Escoba* (Sabloff 1975:61); Tayasal-Paxcaman zone: *Chunzalam* (A. Chase 1984:29); Uaxactun: Joventud Variety *Mamom* (Gifford 1963:26); Yaxha-Sacnab: *Ah Pam Early Mamom/Yancotil Late Mamom / Late Mamom-Tzec-Yancotil* (Rice 1979:13, 22, 25).

Illustration: Figure 4.12-4.13

Type	JOVENTUD RED
Variety	Jolote
Established	Uaxactun (Smith and Gifford 1966:158). Description based on 103 sherds, representing 0.35% of the total K'atabche'kax Ceramic Complex.

Ceramic Group	Joventud
Ware	Flores Waxy
Ceramic Complex	K'atabche'kax Early Facet
Ceramic Sphere Affiliation	Mamom-Chicanel

Principal Identifying Attributes:

(1) The waxy slip color is red (2.5YR 4/6). (2) The paste is fine and compact. (3) The main form is a dish with flaring walls.

Paste, Temper and Firing:

The paste has a fine texture with some carbonate particles. The paste is reddish yellow (5YR 4/8) in color and a core occurs in most examples. The core has a very dark gray (7.5YR 3/0) or black (7.5YR 2/0) color, measuring .4 cm in width, showing that oxidation was not always complete.

Surface Finish or Decoration:

The color of the slip is red (2.5YR 4/6) or dark red (2.5YR 4/8). The slip covers both interior and exterior surfaces.

Forms:

Bowl Forms. Bowls with incurved sides and a vertical neck present a direct rim and rounded lip. The estimated diameter is 18 cm and the thickness of walls is .6 cm. The type maintains its earlier Chaakkax form and measurements.

Inter and Intra-site distribution:

Intra-site distribution:

Joventud Red: Jolote Variety is restricted to Operation XIII. It is part of construction fill of a floor (Zone 2). It occurs in burials of the Late K'atabche'kax Facet (Burial 10, 11, 12, 13, 14, and 15); in a construction fill (Zone 48); and on the floor (Zone 54).

Inter-site distribution:

Altar de Sacrificios: *San Felix Late Facet* (Adams 1971:20).

Illustration: Figure 4.13

Type	CHICAGO ORANGE
Variety	Chucun
Established	Pring (1977a). Description at K'axob based on a complete vessel and a 14317 sherds, representing 48.76% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Chicago
Ware	Fort George Orange
Ceramic Complex	K'atabche'kax Early, Late and Terminal Facets
Ceramic Sphere Affiliation	Mamom-Chicanel

Principal Identifying Attributes:

(1) A thin reddish yellow (5YR 6/8) wash or slip covers the surfaces of vessels, that obeys to the color of the paste. (2) The paste has a fine texture. (3) The tecomates, the bowls with outcurved sides, and the jars with an outcurved neck are the common forms for the Early Facet. (4) During the Late Facet, the abundant forms are jars with outcurved neck.

Paste, Temper and Firing:

Paste is fine and porous containing large particles of what could be calcite and black particles that show on the surface. The sherds have a dark gray (2.5YR 4/0) or very dark gray (2.5YR 4/0) core, during the Early Facet. In the Late Facet, the core presents a dark gray (7.5YR 4/0) color. Both cores measure .6 cm in width. The color of the paste is pink (7.5YR 7/3).

Surface Finish or Decoration:

During the Early K'atabche'kax Facet, the color of the surface is darker, in comparison with the Chaakkax variety. There is a wide variation of surface color, ranging from light brown (7.5YR 6/4), pink (7.5YR 7/4), reddish yellow (5YR 7/6; 7.5YR 6/8), to reddish brown (5YR 5/4). Fire clouding on the surface has a gray (5YR 5/1) or a dark gray (5YR 4/1) color. The interior part of the neck is usually slipped, on most jars.

During the Later Facet, a light reddish yellow (5YR 6/8) slip covers the surfaces of vessels. Fire clouding on the surface has a gray (5YR 5/1); reddish gray (5YR 5/2) and dark gray (5YR 4/1) color. It is quite common to find a lighter red (2.5YR 6/6) slip, that corresponds to the color of the paste. This slip was homogeneously applied to the surface. The interior of neck was also slipped with the same color. Smoothing marks can be appreciated on the surface of some sherds.

The Late and Terminal Facets Forms:

Jar Forms. The jars have a short outcurved neck has an exterior folded rim, with rounded or beveled lip, and a slightly rounded base. The vessels present an estimated diameter varying from 22 to 44 cm. The base diameter is usually rounded. Thickness of vessels varies between .9 to 1 cm (Figure 4.23).

Bowl Forms. During the Late Facet, the bowl with outcurved sides with exterior folded rim increases its diameter to 46 cm. In comparison to the earlier facet, the walls are thicker, as they measure .9 cm.

Inter and Intra-site distribution:

Intra-site distribution:

The Chicago Orange: Chucun Variety is present in all contexts of the K'atabche'kax period. A complete bowl was excavated in Burial 15 (Operation I Phase VIIId-E Area 1 I-99 Zone 81). The bowl has an exterior folded rim with rounded lip, strap handles, and a slightly rounded base. The color of the slip (light red 2.5YR 6/6) is the same, as the one for the paste. The interior of the neck was slipped with the same color. Smoothing marks can be appreciated due to the erosion. Height

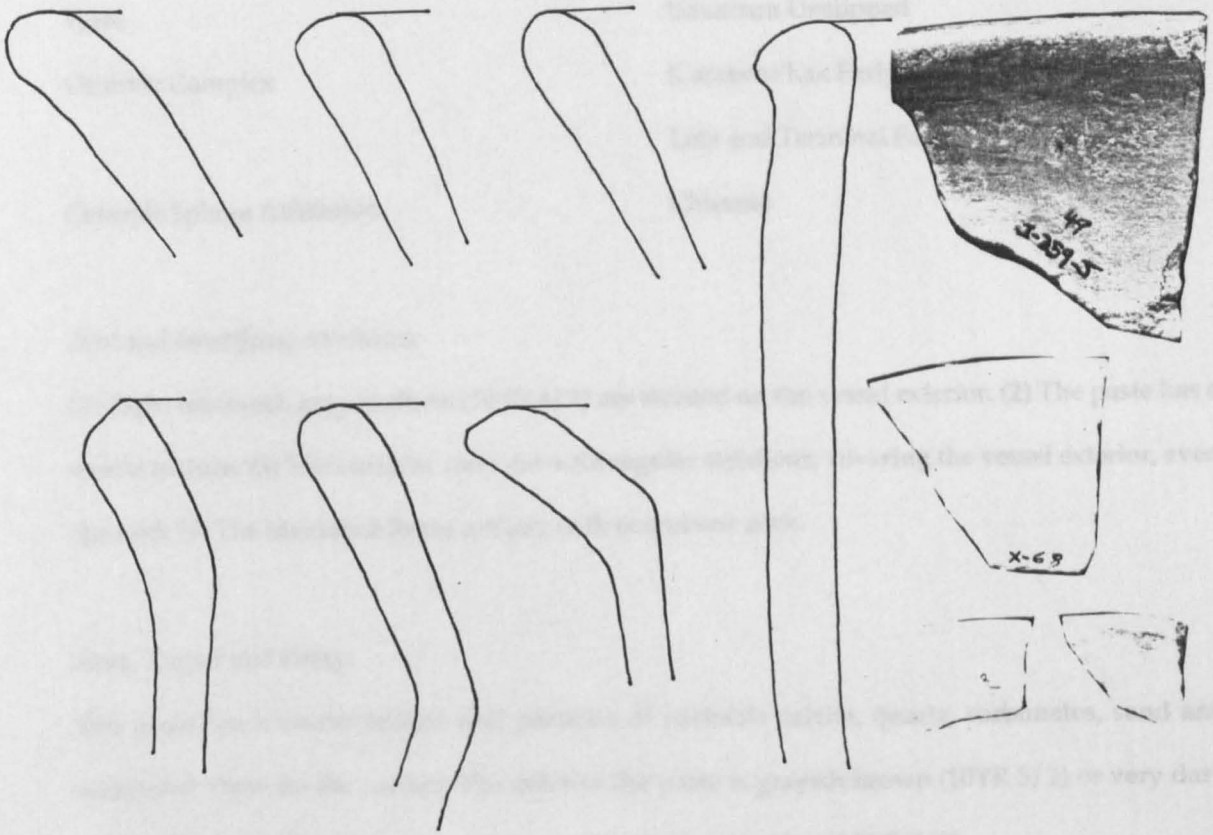


Figure 4.23 Rim Profiles of the K'atabche'kax Chicago Orange: Chucun Variety Jars.

of the vessel is 12.2 cm. The vessel has 10 cm in diameter. Base diameter measures 6.5 cm. The handles have a width of 1.3 cm and a height of 4 cm. Total weight of the vessel is 648 gr.

Inter-site distribution:

Colha: *Onecimo* (Valdez 1988:44); Cuello *Cocos* (Kosakowsky 1987a:82); Kichpanha *Blossom Bank* (Reese and Valdez 1987:39).

Illustration: Figure 4.23

Type	MONKEY FALLS STRIATED
Variety	Monkey Falls
Established	Barton Ramie (Gifford 1976:145). Description at K´axob based on 4556 sherds, representing 15.86% of the total K'atabche'kax Ceramic Complex.

Ware	Uaxactun Unslipped
Ceramic Complex	K'atabche'kax Early, Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) Light brownish gray surfaces (10YR 6/2) are striated on the vessel exterior. (2) The paste has a coarse texture. (3) The surfaces were cut with regular striations, covering the vessel exterior, even the neck (4) The identified forms are jars with outcurved neck.

Paste, Temper and Firing:

The paste has a coarse texture and particles of probable calcite, quartz, carbonates, sand and schist that show on the surface. The color of the paste is grayish brown (10YR 5/2) or very dark grayish brown (10YR 3/2). The core has a very dark gray color (7.5YR 3/0).

Surface Finish or Decoration:

Color on the surface is a light brownish gray (10YR 6/2), pinkish gray (7.5YR 7/2; 5YR 6/2), or reddish yellow (5YR 7/6). A very dark gray (2.5YR 3/0) or light gray (10YR 7/2) color occurs on the surfaces of those vessels that received a constant exposure to fire.

The surfaces were cut with regular, deep and parallel striations. The striations measure .3 to .5 in width and are .2 to .4 cm deep. During the Late Facet, two different patterns of striations were made on the surface of these vessels. The first pattern corresponds to a narrow band of horizontal striations that encircles the vessel, just below the juncture of the neck and the body. The striations extend to the body of the vessel in vertical or lightly oblique (from left down to right) directions. The second pattern corresponds to horizontal or slightly oblique overlapping sets of striations, that are always regular in shape. These striations cover the body vessel, including the neck (Figure 4.24).

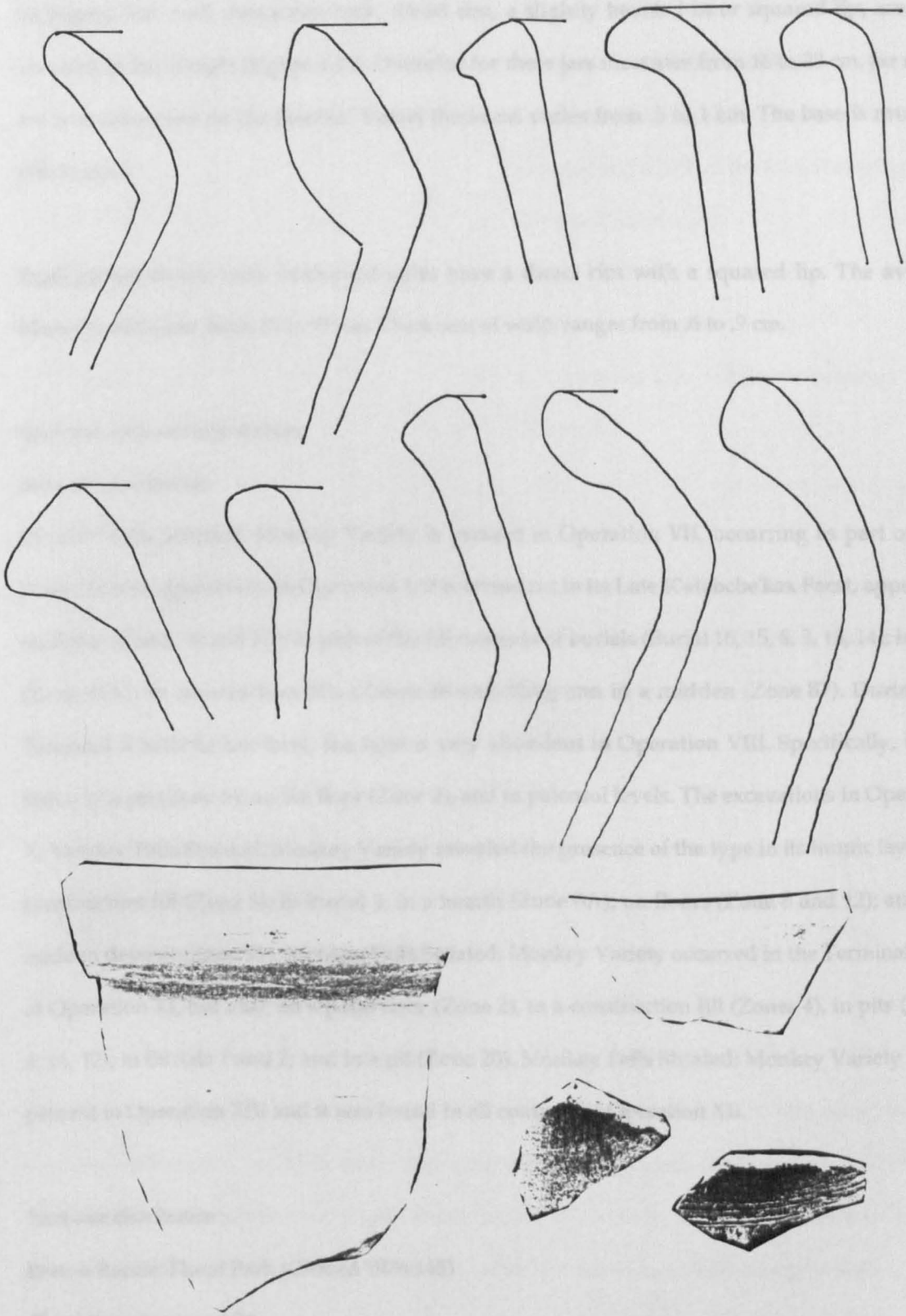


Figure 4.24 Rim Profiles and Sherds of Monkey Falls Striated: Monkey Variety.

Forms:

Jar Forms. Jars with outcurved neck, direct rim, a slightly beveled-in or squared lip, are very common in the sample (Figure 4.24). Diameter for these jars measures from 16 to 20 cm. Jar necks are well smoothed on the interior. Vessel thickness varies from .5 to 1 cm. The base is rounded and striated.

Bowl Forms. Bowls with outcurved sides have a direct rim with a squared lip. The average diameter measures from 18 to 22 cm. Thickness of walls ranges from .6 to .9 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Monkey Falls Striated: Monkey Variety is present in Operation VII, occurring as part of fills, floors, in both operations. In Operation I, it is abundant in its Late K'atabche'kax Facet, appearing on floors (Zones 10 and 72); as part of the fill contents of burials (Burial 16, 15, 6, 3, 13, 14); in a pit (Zone 41A); in construction fills (Zones 46 and 40A); and in a midden (Zone 87). During the Terminal K'atabche'kax facet, the type is very abundant in Operation VIII. Specifically, it was found in a pit (Zone 5), on the floor (Zone 2), and in paleosol levels. The excavations in Operation X, Monkey Falls Striated: Monkey Variety revealed the presence of the type in its humic layers; in construction fill (Zone 3); in Burial 3; in a hearth (Zone 6A); on floors (Zone 8 and 12); and in a midden deposit (Zone 11). Monkey Falls Striated: Monkey Variety occurred in the Terminal Facet of Operation XI, but also, on a patio floor (Zone 2), in a construction fill (Zones 4), in pits (Zones 6, 16, 12); in Burials 1 and 2; and in a pit (Zone 20). Monkey Falls Striated: Monkey Variety is also present in Operation XIII and it was found in all contexts of Operation XII.

Inter-site distribution:

Barton Ramie: Floral Park (Gifford 1976:145)

Illustration: Figures 4.24

Type	MONKEY FALLS STRIATED
Variety	Unspecified (Brown)
Established	Barton Ramie (Gifford 1976:145). Description at K'axob based on 22 sherds representing 0.07% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Monkey Falls
Ware	Uaxactun Unslipped
Ceramic Complex	K'atabche'kax Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) Color of the surface is light brown (7.5YR 6/3) to brown (7.5YR 5/3). (2) The surfaces were cut with well-pronounced regular striations, covering the vessel exterior. (3) The paste has a medium texture. (4) The main form corresponds to thin-walled jars with outcurved neck.

Paste, Temper and Firing:

The paste is finer than in the Monkey Variety, having a medium texture; although, the same types of inclusions are visible on the surface. Color of the paste is grayish brown (10YR 5/2) or very dark grayish brown (10YR 3/2).

Surface Finish or Decoration:

The surfaces tend to be of a reddish gray (5YR 5/2) or light brown (7.5YR 5/3) color and were also cut with regular, parallel, wide, and well-pronounced striations. At K'axob, as at Barton Ramie, different decorative techniques were used for this variety, beside the striations. The neck juncture was decorated with finger nail impressions, punctations, or button applications.

Forms:

Jars Forms. Jars have an outcurved neck, a direct rim, a slightly pointed or rounded lip. Rarely, the rim is exterior folded with a rounded lip. The diameter measures from 16 to 20 cm and the wall thickness is .3 to .7 cm.

Bowl Forms. Bowls with outcurved sides have a direct rim with a squared lip. The average diameter measures from 18 to 22 cm. Thickness of vessels ranges from .3 to .6 cm.

Inter and Intra-site distribution:

Intra-site distribution:

The type was found in Operation VII. It occurred on a floor (Zone 40) and in a fill (Zone 41). It is also present in Operation VII, as part of the fill contents (Zones 2 and 6); and in a pit (Zone 17). In Operation VIII, the presence of this type occurs on a floor (Zone 2), during the Terminal K'atabche'kax. In Operation X, it was found in Early K'atabche'kax levels. It is part of construction fill (Zone 3); of a midden (Zone 11); of a hearth (Zone 16); and a floor (Zone 12). Monkey Falls Striated: Unspecified (Brown) Variety occurs in the fills of Operation XI.

Illustration: No illustration provided.

Type	SAPOTE STRIATED
Variety	Sapote
Established	Uaxactun (Smith and Gifford 1966:162). Description at K'axob based on 445 sherds, representing 1.52% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Sapote
Ware	Uaxactun Unslipped
Ceramic Complex	K'atabche'kax Early, Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) Fine irregular line striations cover the exterior of jars or incurved bowls. (2) The paste has a medium texture. (3) Striations are limited to the body of the vessels. (4) The only identified form corresponds to jars with outcurved neck.

Paste, Temper and Firing:

Light gray paste (10YR 7/2) or very dark gray (10YR 3/1) with a medium texture. Abundant carbonate particles are present in the paste.

Surface Finish or Decoration:

Fine line irregular striations are not more than a millimeter in width and tend to be close-spaced. They are restricted to the body of the vessel, but never to the neck. Sometimes these lines can form crisscross patterns, as well as Monkey Falls: Monkey Variety, but the difference between these types relies on the fine irregular striations of Sapote Striated: Sapote Variety and the deeper regular striations of Monkey Falls (Figure 4.25).

Forms:

Jar Forms. Jars have outcurved necks with rounded or lightly pointed lips. Diameters of these vessels range from 22 to 30 cm. Thickness of walls measures .5 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Sapote Striated: Sapote Variety occurs as part of the humic layers of Structures 93 and 28. It is also part of the Late K'atabche'kax levels in Operation X. In this operation, the type was found on a patio floor (Zone 5), and in a construction fill (Zone 3). In the Early K'atabche'kax Facet, it occurs in a midden (Zone 11) and on a floor (Zone 8). In Operation VIII, Sapote Striated: Sapote Variety appears in a pit (Zone 5) and as part of the fill of a floor (Zone 2). In Operation I, Sapote Striated: Sapote Variety is present for the Late K'atabche'kax. The type occurred in construction fill (Zones 45, 57, 50, 34, 38), in Burial 3, and on a floor (Zone 21). In Operation VII, Sapote Striated: Sapote Variety was found in a construction fill (Zone 2).

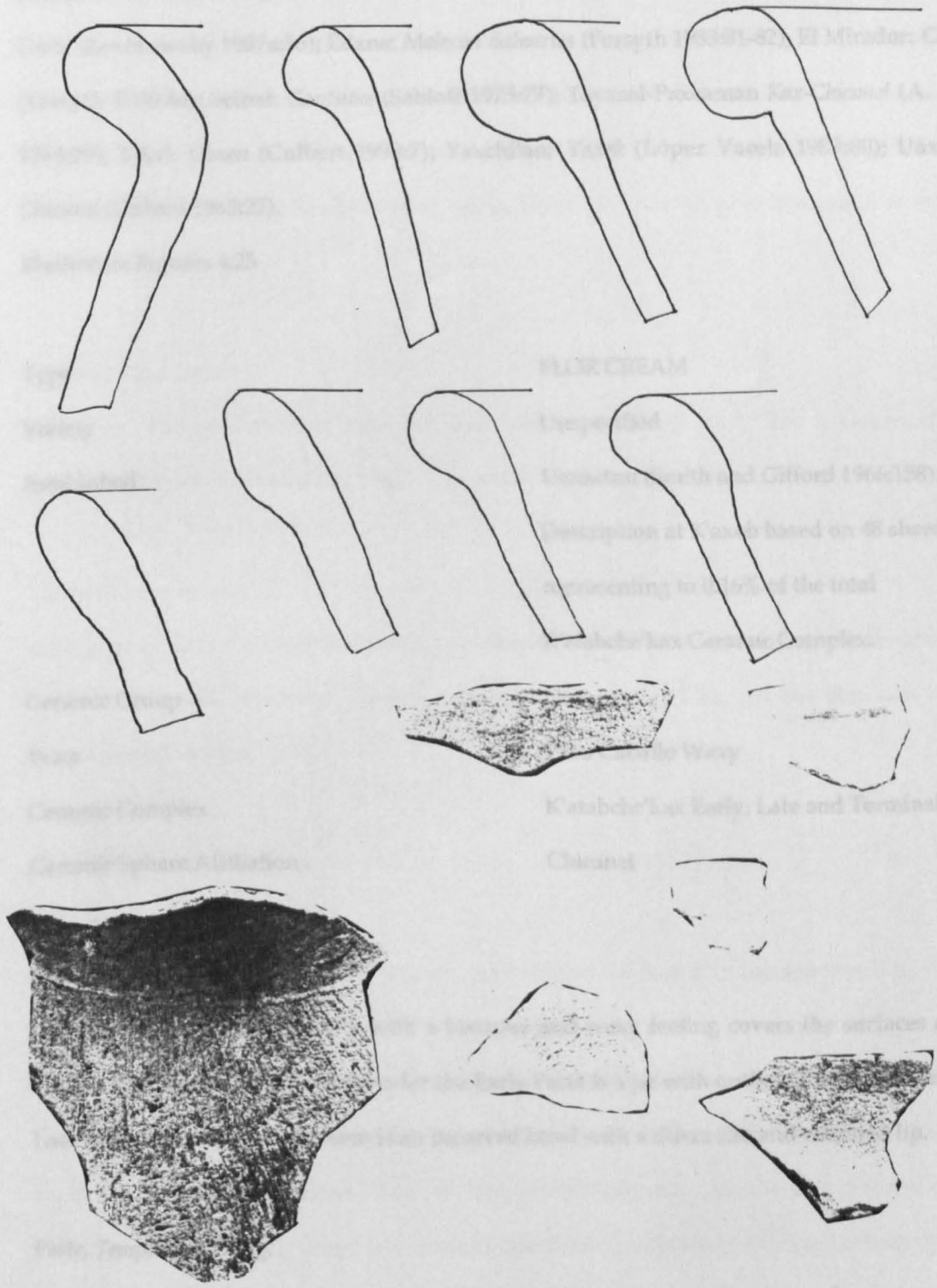


Figure 4.25 Rims and Sherds of Sapote Striated: Sapote Variety.

Inter-site distribution:

Altar de Sacrificios: *San Felix, Early and Late Plancha* (Adams 1971:19); Barton Ramie: *Barton Creek* (Gifford 1976:105); Becan: *Acachen* (Ball 1977a:10-11); Cerros: *Ixtabai-C'oh-Tulix* (Robertson and Freidel 1982:67; 1986:97); Colha: *Chiwa, Onecimo and Blossom Bank* (Valdez 1987:77, 125); Cuello: *Cocos* (Kosakowsky 1987a:56); Edzna: *Malecon Baluartes* (Forsyth 1983:81-82); El Mirador: *Cascabel* (Forsyth 1986:46); Seibal: *Cantutse* (Sabloff 1975:77); Tayasal-Paxcaman *Kax-Chicanel* (A. Chase 1984:29); Tikal: *Chuen* (Culbert 1993:7); Yaxchilan: *Yaxek* (López Varela 1989:80); Uaxactun: *Chicanel* (Gifford 1963:27).

Illustration: Figures 4.25

Type	FLOR CREAM
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:158). Description at K'axob based on 48 sherds, representing to 0.16% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Flor
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Early, Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) A thin cream (5YR 8/1) slip with a lustrous and waxy feeling covers the surfaces of these vessels. (2) The only identified form for the Early Facet is a jar with outflared neck. (3) During the Late Facet, the predominant form is an incurved bowl with a direct rim and rounded lip.

Paste, Temper and Firing:

Paste is red (10R 5/8) or pale yellow (2.5YR 7/3) in color. It has a fine to medium texture, with evident small carbonate particles and black particles. Differential firing is present and it definitely affected most of the surfaces, to a point in which some Flor Cream sherds can be misplaced as

Polvero Black: Unspecified Variety sherds. A dark gray (2.5Y 7/3) core occurs in some sherds, measuring .3 cm in width.

Surface Finish or Decoration:

Well-preserved sherds are covered with a white waxy slip (5YR 8/1), that has a crackled appearance. The thin white slip varies in color to a pinkish white (7.5YR 8/2). Paste surface shows through the slip, changing in color to a gray (2.5Y 4/0) or a very dark gray (2.5Y 5/0) and even black (2.5Y 2/0) due to differential firing. The slip was applied to both sides of incurved bowls.

The Early Facet Forms:

Jar Forms. The predominant form are jars with an outflared neck, that measures 8 cm in diameter. The rim is exterior thickened. The width of walls ranges from .5 to 1 cm.

The Early Facet Forms:

Bowl Forms. The only identified form is an incurved bowl with a restricted orifice, that has an estimated diameter of 42 cm. The rim is direct with a rounded lip, and the thickness of walls ranges from .5 to 1 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Flor Cream: Unspecified Variety is present in Operation VII as part of construction fills.

Inter-site distribution:

Altar de Sacrificios: *Plancha* (Adams 1971:26); Barton Ramie *Barton Creek* (Gifford 1976:93); Becan: *Pakluum* (Ball 1977a:37); Colha: *Oncecimo Blossom Park* (Valdez 1988:45); Chan Chen *Middle Formative* (Ball 1983:205); Edzna *Baluartes* (Forsyth 1983:82); Mirador *Cascabel -Chicanel* (Forsyth 1986:39); Quintana Roo *Chicanel* (Fry 1972); Seibal Cantutse (Sabloff 1975:84); Tayasal-Paxcaman *Kax-Chicanel* (A. Chase 1984:29); Tikal Tzec (Culbert 1993:6); Yaxchilan *Yaxek* (López Varela 1989:79); Uaxactun Flor Variety *Chicanel* (Gifford 1963:27).

Illustration: No illustration provided.

Type	LAGUNA VERDE INCISED
Variety	Laguna Verde
Established	Uaxactun (Smith and Gifford 1966:159). Description at K´axob based on two partially complete vessels and 16 sherds, representing 0.05% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Early, Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

1) A red (10R 5/8) slip with a waxy feeling covers the surfaces of the vessels. (2) The paste has a fine texture. (3) Incised designs occur in a simple linear or more complicated curvilinear-rectilinear arrangements. (4) The common forms are bowls with flared sides and vases with outcurved sides.

Paste, Temper and Firing:

The Sierra Red paste contains probable particles of calcite, iron, schist, and black particles. The paste has a fine texture and is red (2.5YR 5/8; 2.5YR 4/6) or yellowish red (5YR 5/6). The paste of some sherds that have been exposed to constant fire has a black (7.5YR 2/0) or gray (5YR 5/1) color.

Surface Finish or Decoration:

The surfaces are covered with a red (10R 5/8) waxy slip finish and are decorated with incised lines, varying in width from .1 to .2 cm. Arrangements include single or double lines, encircling the vessel wall and the upper side of flaring rim or flange. Diagonal lines on vessel walls are also common. Crude drawn rectilinear-curvilinear designs represent some life or complex symbolic

Figure 4.26 Two Views of a Laguna Verde Incised: Laguna Verde Variety Vessel.

forms. Chevrons are a more common pattern (Figure 4.26). The vessels are decorated with vertical grooved lincised lines.

Forms:

Bowl Forms. Bowls with flared sides, direct rim, and rounded lip, are very common for this type. Diameter of bowls is 14 cm. Thickness of vessels varies from .8 to .7 cm.

Vase Forms. Vases have outcurved sides and an everted rim, with a rounded lip. Rim diameters vary from 18 to 21.5 cm. Thickness of the sides is .8 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Laguna Verde Incised: Laguna Verde Variety is present in Operation VII as part of construction fill (Zone 41). In Operation X, the type appeared only in humic layers. In Operation XI, it is present in a midden (Zone 72) of the Early K'atabche'kax and in a construction fill (Zone 4) of the Terminal K'atabche'kax. In Operation XIII, Laguna Verde Incised: Laguna Verde Variety was found in a pit (Zone 30) and on a floor (Zone 3) of the Terminal K'atabche'kax.

Two complete vases were found in Operation I. The vase, with everted rim and outcurved sides (Phase VI-Operation I I-241 121A), was decorated with chevrons. Chevrons were incised in a circumferential band below the rim. The height of each chevron is 9 cm and measures 3.9 cm in width. The vessel is decorated with incised lines that run from the base to the rim. The incised lines resemble flower petals. Fire clouding is present and the color ranges within Sierra Red. The height of the vessel 16 cm and the diameter is 21.5 cm (Figure 4.26).

The second vase with vertical walls has an everted rim and a rounded direct lip (Phase IX-Operation I I-567 Z236B Sq. E). The paste has large inclusions and strong brown core (7.5YR 4/8). General color of the paste is 10YR 7/6. Vertical incised lines run at 4 cm from the rim (Figure 4.27). Each incised gadroon has 3 cm in width. Two circumferential bands, each 1 cm in width, present chevrons. External fire clouding is present. The external lip is brown (5YR 4/6) and the internal slip is orange (2.5YR 5/8) The base is flat and eroded and measures 11.2 cm. Rim diameter is 22 cm. Total height is 16.8 cm. Weight of the vessel is 1, 160 gr. (Figure 4.27).

Inter-site distribution:

Barton Ramie *Barton Creek* (Gifford 1976:91); Becan: *Pakluum* (Ball 1977a:83); Caledonia: Late and Terminal Formative (Ball 1983:213); Colha: *Onecimo and Blossom Park* (Valdez 1988:45); Cuello: *Cocos* (Kosakowsky 1987a:70); Edzna: *Baluartes* (Forsyth 1983:81); Komchen: *Late Nabanche* (Andrews V 1988:53); Mirador: *Cascabel-Chicanel* (Forsyth 1983:27); Seibal: *Cantutse* (Sabloff 1975:78); Tayasal-Paxcaman: *Kax-Chicanel* (A. Chase 1984:29); Tikal: *Tzec* (Culbert 1993:6); Uaxactun: *Chicanel* (Gifford 1963:27).

Illustration: Figure 4.26 and 4.27

Type	LAGUNA VERDE INCISED
Variety	Grooved Variety
Established	Seibal (Sabloff 1975:80).
	Description at K´axob based on 3 sherds, representing 0.01% of the K'atabche'kax Ceramic Complex.

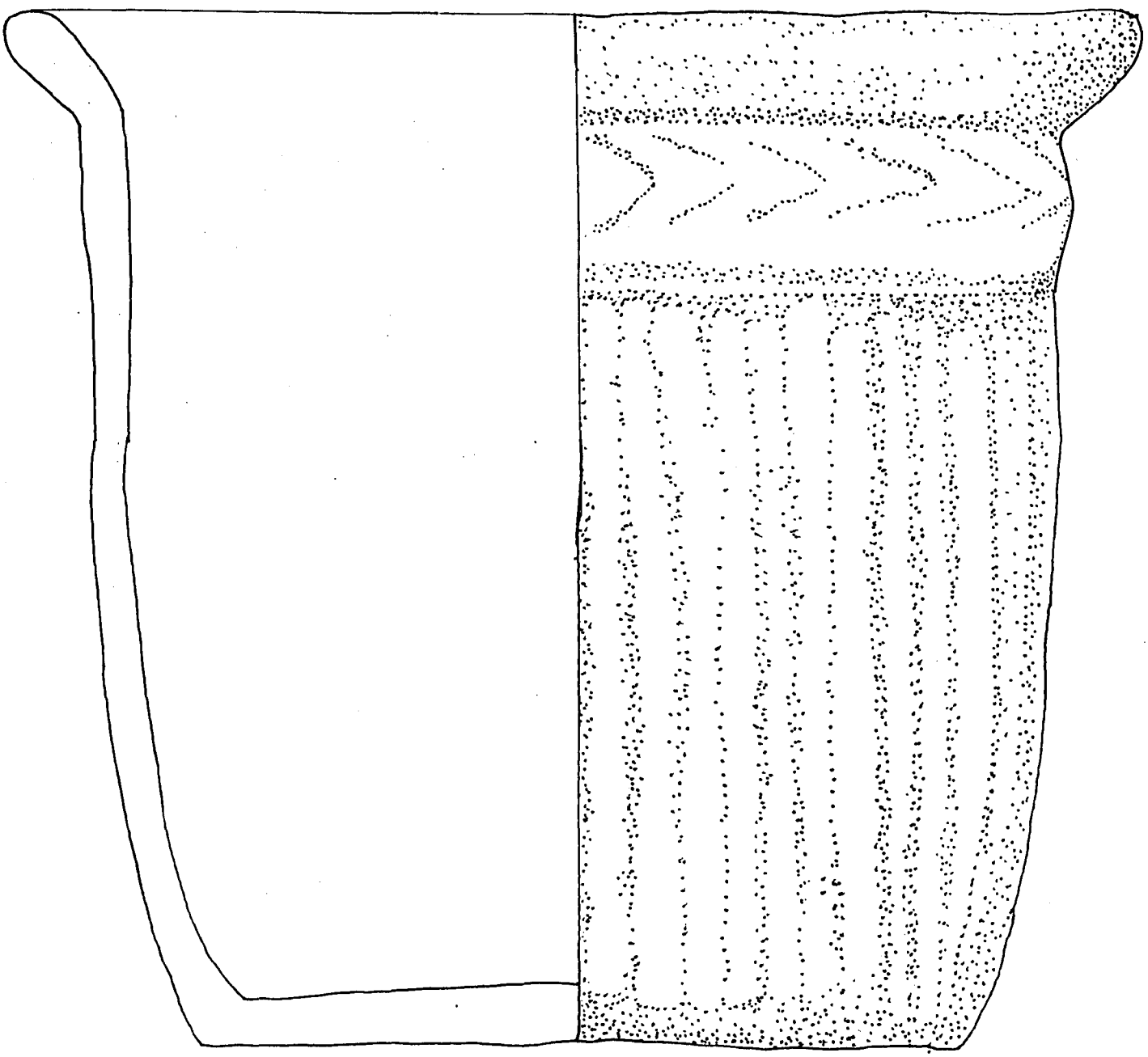


Figure 4.27 A Laguna Verde Incised: Laguna Verde Variety Vessel.

Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Early and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) The basic decoration is composed of incised-grooved lines, mostly on the rim. (2) The common form is a bowl with flared sides.

Paste, Temper and Firing:

The Sierra Red paste contains probable particles of calcite, iron, schist and black particles. The paste is fine in texture and has a red (2.5YR 5/8; 2.5YR 4/6) or yellowish red (5YR 5/6) color. The paste of some sherds that have been exposed to constant fire has a black (7.5YR 2/0) or gray (5YR 5/1) color.

Surface Finish or Decoration:

The sherds are decorated with grooves that are .5 cm in width, on the rim. Surface finish is the same as Sierra Red.

Forms:

Bowl Forms. Bowls with flared sides have a direct rim with rounded lip. Diameter of bowls varies from 18-20 cm. Thickness of vessels varies from .8 to .7 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Laguna Verde Incised: Grooved Variety is present in Operation VIII, specifically, in a Late Facet midden (Zone 15). The type appeared also on a floor (Zone 2) of the Terminal Facet. In Operation I, Laguna Verde Incised: Grooved Variety is part of an Early K'atabche'kax midden (Zone 87).

Inter-site distribution:

Colha: *Onecimo and Blossom Park* (Valdez 1988:45); Cerros: *Ixtabai* (Robertson and Freidel 1982:67); Cuello: *Cocos* (Kosakowsky 1987a:69); El Mirador: *Cascabel* (Forsyth 1989:31); Piedras Negras: *Preclassic* (Holley 1986:62).

Illustration: No figure provided.

Type	LAGARTOS PUNCTATED
Variety	Lagartos
Established	Uaxactun (Smith and Gifford 1966:156). Description at K'axob based on 12 sherds, representing 0.04% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Late Facet
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

Description based on 6 sherds with deep dot punctations and finger-nail impressions.

Paste, Temper and Firing:

Probably, the paste contains calcite, iron, schist, and black particles. The paste is medium in texture. The paste is red (2.5YR 5/8; 2.5YR 4/6) or yellowish red (5YR 5/6). The paste of some sherds that have been exposed to constant fire has a black (7.5YR 2/0) or gray (5YR 5/1) color.

Surface Finish or Decoration:

The decoration on these jars consists on heavy dot punctations and finger nail impressions at the neck juncture. Surfaces are red slipped but dots and finger nail impressions are pre-fired.

Figure 4.28 Sherds of Lagartos Punctated: Lagartos Variety with Finger-nail Impressions.

Forms:

Jar Forms. Jars with outcurved necks present an exterior thickened rim. Diameter of these vessels varies from 14 to 16 cm. Vessel thickness varies from .6 to .8 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Lagartos Punctated: Lagartos Variety is present in Operation XI. It was found in Burial 1 and in construction fill (Zone 10) of the Terminal Facet.

Inter-site distribution:

Altar de Sacrificios: *Plancha* (Adams 1971:46); Colha: *Onecimo and Blossom Park* (Valdez 1988:45); Cuello: *Cocos* (Kosakowsky 1987a:70); Seibal: *Cantutse* (Sabloff 1975:84); Mirador: *Cascabel-Chicanel* (Forsyth 1986:27); Mayapan: *Chicanel* (Smith 1971:138); Tikal: *Chuen-Cauac-Cimi* (Culbert 1993:8, 9, 10); Yaxchilan: *Yaxcab* (López Varela 1989:83); Uaxactun: *Chicanel* (Gifford 1963:27).

Illustration: Figure 4.28

Type	SIERRA RED
Variety	Sierra
Established	Uaxactun (Smith and Gifford 1966:163). Description at K'axob based on 6104 sherds, representing 20.79% of the total K'atabche'kax Ceramic Complex. A total of six partially complete vessels was identified for the Early Facet, 27 for the Late Facet, and five for the Terminal Facet.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Early, Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

1) A red (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6) slip with a waxy feeling covers the surfaces of the vessels. (2) The paste has a fine texture and tends to crumble. (3) Common forms for the Early Facet are bowls with markedly incurved sides, bowls with incurved, incurved-recurved, rounded, flared, outcurved and vertical sides; dishes with flared sides; spouted jars with incurved sides; and vases with vertical walls. (4) The Late Facet is characterized by bowls with rounded, outcurved, flared and incurved-recurved sides; spouted jars with incurved-recurved sides; dishes with outcurved sides; and plates with flared sides. (5) The Terminal Facet is characterized by bowls with flanges.

Paste, Temper and Firing:

Sierra Red: Sierra Variety paste contains probable particles of calcite, iron, and schist. Generally, paste in most forms tends to crumble, which is a very particular characteristic of Sierra Red: Sierra Variety in the Peten and Yucatan. Nevertheless, there are significant differences in the texture of the paste, depending on the form. For most bowls, it is fine, although granular, and with a red (2.5YR 5/8; 2.5YR 4/6) color. Frequently, the paste has red (2.5YR 5/8; 2.5YR 4/6) or

yellowish red (5YR 5/6) color. The paste of some sherds that have been exposed to constant fire has a black (7.5YR 2/0) or gray (5YR 5/1) color.

In the jar form, the paste is fine and compact, with a granular texture. The paste color is reddish yellow (5YR 5/6) or light brown (7.5YR 6/3). The core is darker in color, being a dark gray (7.5YR 4/0) or very dark gray (7.5YR 3/0), than the one formed in the paste for bowls. The core that is formed measures from .3 to .5 cm in width. Kosakowsky (1987a:57) reported finding no cores in the sherds at Cuello.

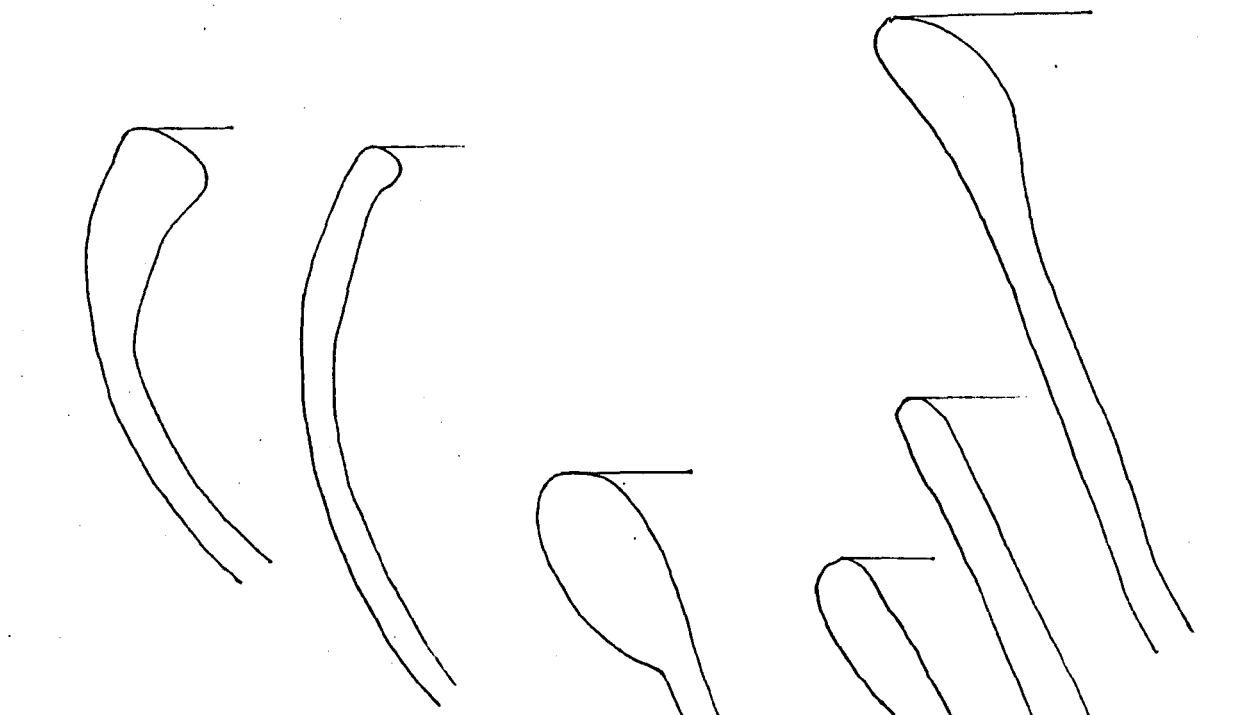
Surface Finish or Decoration:

The red (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6) overall slip is found on both surfaces of bowls and dishes. Although the predominant color on the exterior is red (10R 4/6), on most jar surfaces it is reddish yellow (5YR 5/6), red (10 R5/8; 10R 4/8; 10R 4/6), or reddish gray (10R 5/1). In most jars, the neck interior is red slip, within this range. Fire clouding is very common on these vessels, obscuring the red slip into a light yellowish brown (10YR 4/6) for most bowls. In contrast, fire clouding on jars varies from a reddish yellow (5YR 6/6), red (10R 5/8 10R4/6), reddish gray (10R 5/1), very dark gray (2.5YR 3/0), to a black (2.5Y 2/0) color.

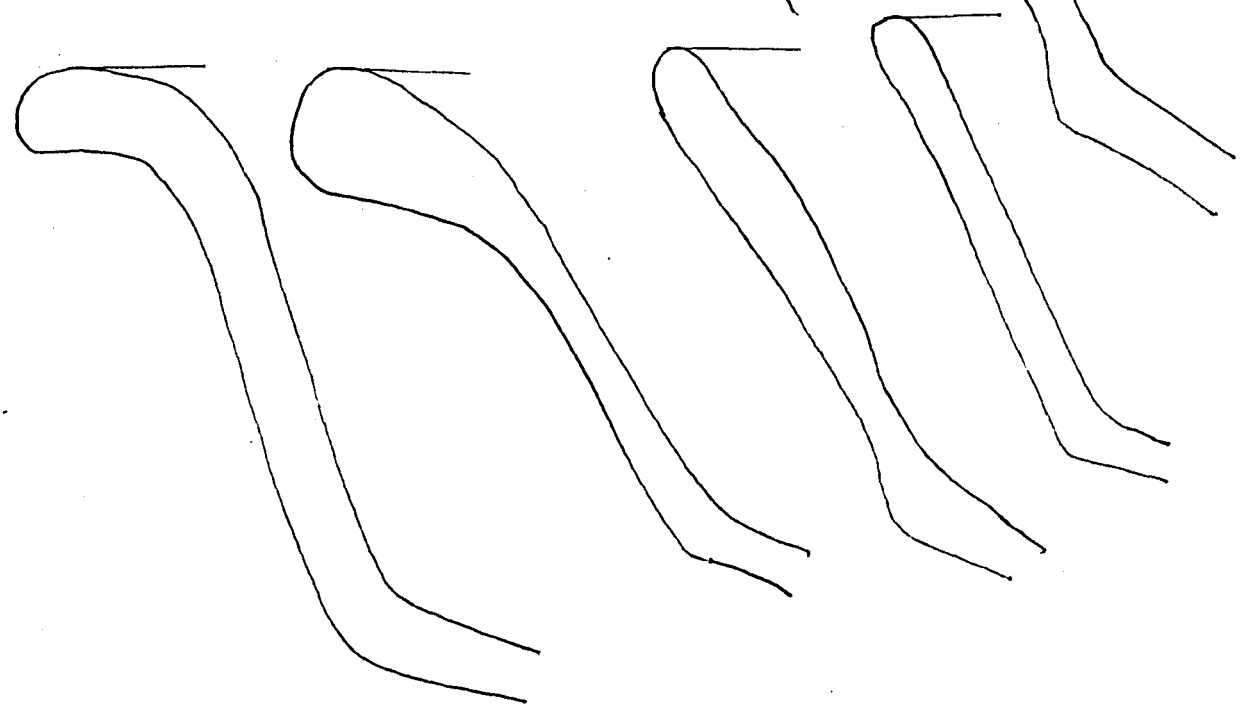
The Early Facet Forms:

Dish Forms. Dishes within the ceramic assemblage have flared sides and outflared everted rim with a rounded lip. Diameter for these vessels ranges from 40 to 42 cm. Dishes have a height of 7 cm. Bases are flat and one example has 33 cm in diameter.

Bowl Forms. For the Early Facet, bowls with incurved sides and restricted orifice are very abundant in the ceramic sample (Figure 4.29:a). Generally, these bowls present an interior thickened rim and a flat base. Surface color on exterior and interior is reddish yellow (5YR 5/6) or red (10R 5/8). Fire clouding occurs on the exterior of this form. Height of vessels seems to be standardized in most bowls. In Burial 27, a bowl measures 8.3 cm in height. The diameter of this vessel is 8.8 cm. The weight of this partially complete vessel is 336 gr.



A. Bowls with incurved sides



B. Bowls with outcurved sides

Figure 4.29. Rim profiles of Sierra Red: Sierra Variety

A bowl with incurved sides presents an horizontal everted rim with a rounded lip (Figure 4.30). It has 21 cm in diameter and a total height of 7.5 cm. It is red slipped on both the interior and exterior surfaces. The diameter of the base is 12.8 cm and the weight of this vessel is 524.6 gr.

Figure 4.30 The Bowl with Incurved Sides found in Burial 19-Operation I.

The incurved-recurved side bowl is another common form for the Early Facet. Bowls with incurved-recurved sides have a direct rim with a rounded lip. In one example, the diameter is 30 cm. The base is slightly incurved, measuring 13.5 cm in diameter. A complete incurved-recurved side vessel has also an exterior thickened rim and a partially squared lip (Figure 4.31). The bowl has 15.5 cm in diameter and 8.5 cm in height. The base is flat and has 5 cm in diameter. The interior bottom of the vessel is rounded. On the surfaces the color is reddish yellow (5YR 5/6) or red (10R 5/8).

Bowls have rounded sides, interior thickened rim, and incurved base. Bowls have 15 cm in diameter. The height of the vessel is 10 cm. The diameter of the base is 4.5 cm. Surface on both exterior and interior is reddish yellow (5YR 5/6) or red (10R5/8) in color. Fire clouding occurs on exterior in a very dark gray (2.5YR 3/0) or black (2.5Y 2/0) color.

It is also common to identify bowls with flared sides and a horizontal everted rim. Flaring bowls have also an exterior thickened rim with a rounded lip. The diameter in this form ranges from 15 to 26 cm. Height of the vessels ranges from 5.4 to 7.5 cm. Thickness of the sides is 1 cm.

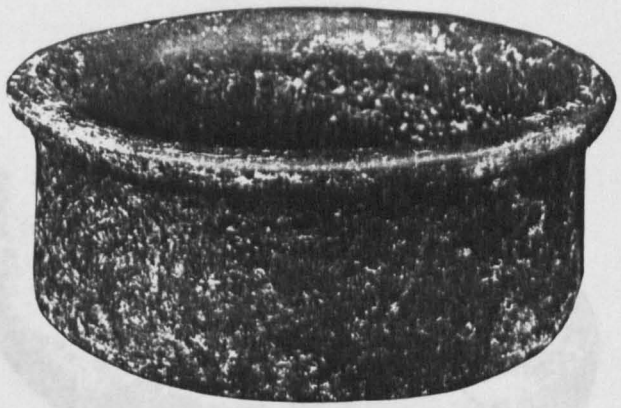


Figure 4.31 The Incurved-recurved Vessel found in Burial 24-Operation I.

Another common form corresponds to bowls with outcurved sides, a flat base, an everted rim and a rounded lip. It is common for these outcurved sides bowls to have an incurved base, measuring 20 to 21.5 cm in diameter.

Jar Forms. Spouted jars with incurved sides have an outflaring neck with exterior thickened rim and rounded lip. The interior of the neck is slipped. One example has 12.5 cm in diameter. Height of the vessel is 10.7 cm. The spout has a height of 8 cm and its orifice has a diameter of 1.8 cm. The base is slightly incurved and measures 9 cm in diameter. Total weight of this jar is 931 gr (Figure 4.32).

Vase Forms.

A vase with outcurved sides, exterior thickened rim with rounded lip is extremely eroded; but, it has light reddish brown (2.5YR 6/4) paste. The overall slip is dark gray (2.5YR 4/8) in color. Fire clouding occurs in a light olive brown (2.5Y 5/4), brownish yellow (10YR 6/6) and yellowish

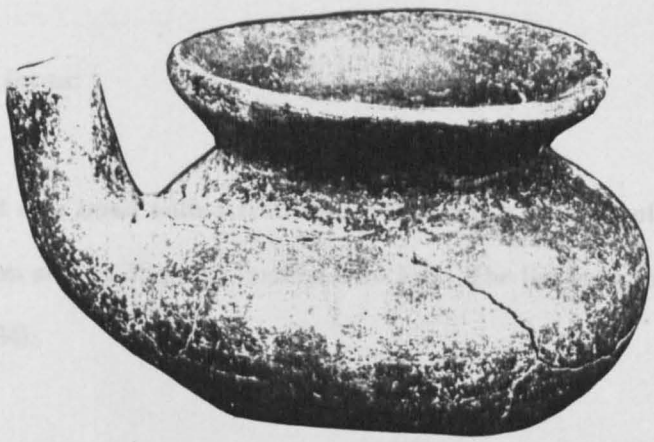


Figure 4.32 The jar spouted vessel found in Burial 19-Operation I.

Figure 4. 33 The Vase found in a Cache of Operation VIII.

brown (10YR 5/6) color. The vessel has 17 cm in diameter and a height of 14 cm. The diameter of the flat base is 10 cm (Figure 4.33).

The Late Facet Forms:

Bowl Forms.

One incurved side bowl with a restricted orifice has a double collar neck. The total height of vessel is 8.7 cm and its diameter measures 10.2 cm. The flat base has an estimated diameter of 7 cm (Figure 4.34).

Figure 4.34 The Collared-neck Bowl found in Burial 4-Operation VIII

Flared sides bowls present a wide variety of rims and lips (4.29:b). Sometimes, flared bowls present a horizontal everted rim and a grooved lip, giving a guttering effect. Wall thickness in all of these vessels is estimated from .4 to 1.1 cm. Bowls with flared sides and a horizontal everted rim and rounded lip have a varying diameter from 28.7 to 42 cm. The total height of these vessels ranges from 9.3 to 10 cm. Thickness of walls varies from .5 to .7 cm. Bowls with flaring sides and a horizontal everted rim with rounded lip are associated with an incurved base. In one example, the horizontal everted rim extends at a height of 7 cm from the base and it is incised. Height of this vessel is 9.3 cm and the diameter is 42 cm. The diameter of the flat base is 21.5 cm and the weight is 2, 097 gr. Bowls with flared sides have 37 cm in diameter. The height is 9.7 cm. The base is flat and has 24 cm in diameter. Total weight of vessel is 706 gr.

A flared side bowl has an exterior thickened rim and rounded lip. The vessel presents a flat base. Height of vessels is 10.5 cm and the diameter is 30 cm. Thickness of vessel is .8 cm. Diameter of the base is 22 cm (Figure 4.35).

Figure 4.35 The Bowl found in Burial 3-Operation I.

One bowl with flaring sides has an exterior thickened rim and rounded lip. It has 24 cm in diameter (Figure 4.36). Total height is 13 cm. Weight is 1, 406 gr. The bowl has a flat base with 18.5 cm in diameter. The paste is fine with a core almost 1 cm in diameter. Fire clouding occurs on the surface of the vessel from very pale brown (10YR 7/3), dark gray (2.5Y 4/0), to black (2.5Y 2/0) and red (2.5YR 5/6).

Figure 4.36 The second vessel found in Burial 6-Operation XI.

Sierra Red: Sierra Variety bowls have outcurved sides and a horizontal everted rim and rounded lip. One example has 24 cm in diameter. The height of the vessel is 8.5 cm. The rim everts at 6.2 cm at a 45 angle. Interior floor of the vessel is darkened in a very dark gray color (10YR 3/1), due to fire exposure.

Bowls with outcurved sides present an outflared rim with rounded lip. In a very eroded vessel, the estimated diameter is 54 cm. Diameter of these vessels ranges from 25 to 60 cm. Average height is 8.9 cm. Thickness of walls is .7 cm. One bowl with outcurved sides presents an everted rim that is depressed, giving a gutter rim effect. The diameter of vessel is 21.3 cm and its height is 6.3 cm. The vessel slip is fairly eroded, but has a reddish yellow (5YR 6/6) color. Fire clouding is present on the exterior of the vessel in a black color (7.5YR 5/0). The diameter of the base measures 13.8 cm. The weight of the vessel is 739 gr (Figure 4.37).

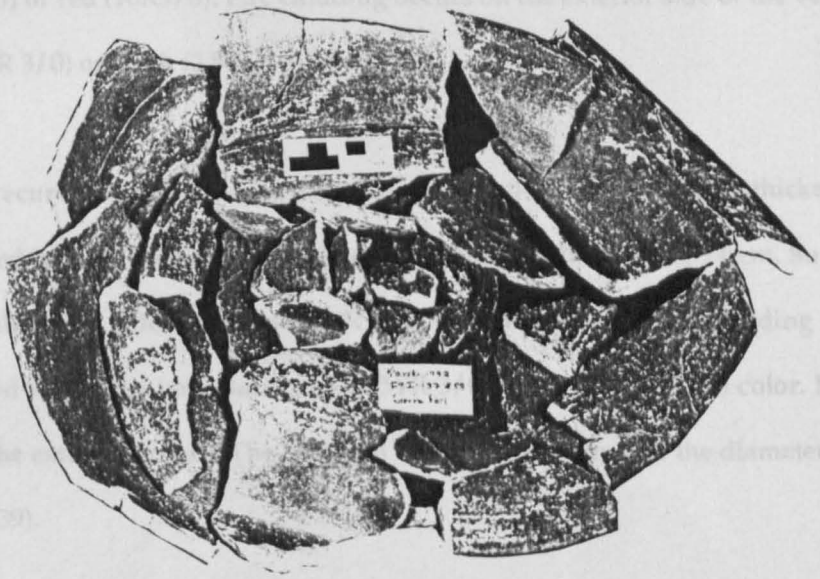


Figure 4.37 The Bowl found in Burial 17-Operation I.

The bowls with outcurved sides has a flat base with 18.3 cm in diameter. Thickness of sides is 1.2 cm. The vessel has a painted cross on the base that is very eroded (Figure 4.38).

A less common form for the Late Facet is a bowl with incurved sides. One example presents 18 cm in diameter. It has an everted rim, rounded lip and flat base. The diameter of the base is 14 cm

Figure 4.38 The vessel found in Burial 10-Operation XII.

and the height of the vessel is 9.8 cm. Surface color on both exterior and interior sides is reddish yellow (5YR 5/6) or red (10R5/8). Fire clouding occurs on the exterior side of the vessel in a very dark gray (2.5YR 3/0) or black (2.5Y 2/0) color.

The incurved-recurved sides bowls with outcurved neck have an interior thickened rim and slightly incurved base. A complete vessel has an estimated diameter of 24 cm. Surface on both exterior and interior is reddish yellow (5YR 5/6) or red (10R5/8). Fire clouding in this vessel obscures the red slip into a very dark gray (2.5YR 3/0) or black (2.5Y 2/0) color. Rootlet marks are visible on the exterior surface. The height of the vessel is 10 cm and the diameter of the base is 7 cm (Figure 4.39).

One bowl with rounded sides and a horizontal everted rim has 28.5 in diameter. Height of the vessel is 9 cm. The diameter of the flat base is 26 cm and the weight is 2, 118 gr (Figure 4.40).

Dish Forms. Dishes with outcurved sides and flat base present a horizontal everted rim with a rounded lip. The vessels have an average height of 8.5 cm. The rim projects at 7 cm in height. Diameter of these vessel ranges from 21 to 60 cm. Estimated diameter of flat bases is 45 cm. A similar dish with outcurved sides and a flat base has an everted rim with a rounded lip. The rim

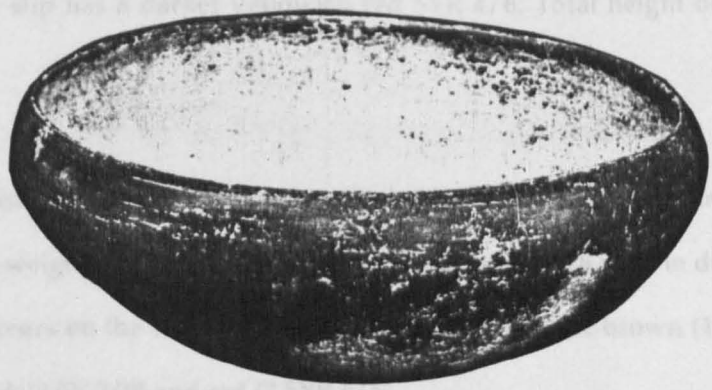


Figure 4.39 The Bowl in Burial 23-Operation I.

Figure 4.40 The Bowl found in Burial 15-Operation VIII.

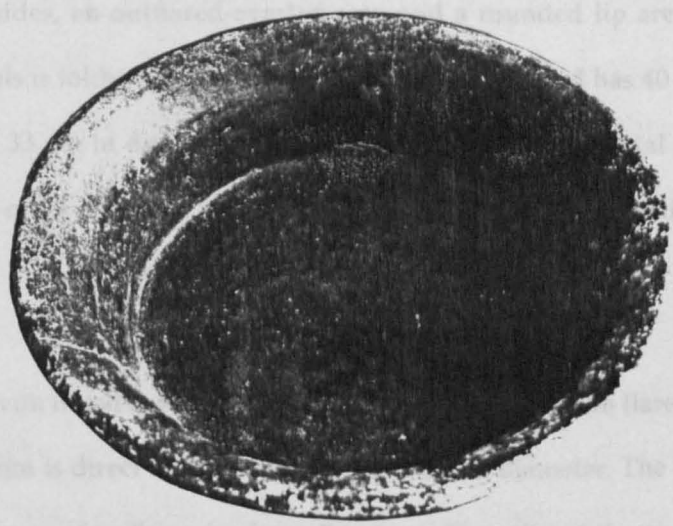


Figure 4.41 The Dish found in association with the Collared-neck Bowl in Burial 4-Operation I.

is outflaring at 3.3 cm and everts 4.6 cm. Diameter of the vessel is 21 cm. The vessel was probably exposed to fire as the slip has a darker yellowish red 5YR 4/6. Total height of vessel 7.5 cm (Figure 4.41).

An outcurved sides dish presents an outflared everted rim, having 28 cm in diameter. The total height is 7.5 cm. Total weight is 972 gr. The dish has a flat base with 18.5 cm in diameter (Figure 4.42). Fire clouding occurs on the surface of the vessel from very pale brown (10YR 7/3), dark gray (2.5Y 4/0), to black (2.5Y 2/0) and red (2.5YR 5/6).

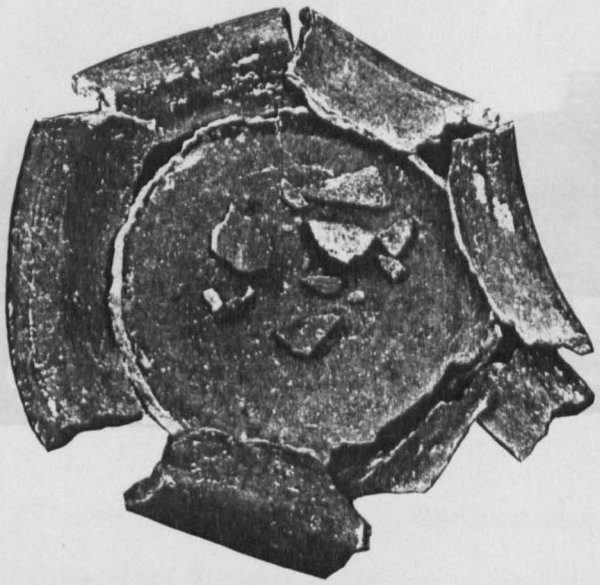


Figure 4.42 The Dish with Outcurved Sides found in Burial 6-Operation XI.

Dishes with flared sides, an outflared-everted rim, and a rounded lip are very common. The height of these vessels is fairly standardized. For example, one bowl has 40 cm in diameter. The base is flat and has 33 cm in diameter. It has 7 cm in height and a total weight of 1, 928 gr. Another dish has 32 cm in diameter. Height of the vessel is 7.3 cm and the diameter of the base is 21 cm.

Plate Forms: Plates with flared sides are common. An eroded plate with flared sides has a slightly rounded base. The rim is direct and rounded, with 14 cm in diameter. The height of the plate is 2.7 cm and the thickness of walls varies from .7 to 1 cm. The color of the paste is light gray (2.5Y 7/2). A better preserved plate has an outflared everted rim with a slightly squared lip and an

estimated diameter of 16 cm. The base is slightly rounded, measuring 9 cm in diameter. The weight of this vessel is 198 gr.

Jar Forms. One example of a jar with vertical neck, direct rim and rounded lip has a total height of 11 cm. Diameter of the vessel is 12.3 cm and the diameter of the flat base is 6 cm. The vertical neck has 1.8 cm in height. Height of the spout is 4.9 cm and the diameter of the spout is 1.3 cm. Opposite to the spout there is an application that is extremely eroded to determine its shape (Figure 4.43).

Figure 4.43 Two Views of the Jar Spouted Vessel found in Burial 2-Operation VIII.

Jars with outcurved neck and a direct rim with rounded lip are also common. Miniature jars occur in the ceramic assemblage; but, these are extremely eroded and fragmented. Neck height in most jars with vertical or outflared neck, direct rim and rounded lip, ranges from 2.4 to 5.7 cm. Average measurement is 3 cm. Diameter ranges within 10 to 12 cm. Thickness of walls in most jars is .7 cm, but the majority of sherds measure from .3 to 1 cm in thickness.

A jar spouted vessel has incurved-recurved sides. The incurved sides jar is gadrooned. The gadrooning was probably made by pressing a finger, continuously, encircling the vessel (Figure 4.44). The neck of the vessel is slightly outcurved and has a height of 8.4 cm. The rim is exterior thickened with a rounded lip. The spout is located at 4.9 cm from the rim and has a total height of

8.5 cm. The spout has an orifice with a 1.4 diameter. Total height of the vessel is 13.9 cm with a diameter of 17.5 cm. The diameter of the base measures 10 cm. The vessel was red (10R 5/8) and light red (10R 6/8) slipped on the exterior. In the interior, only the neck was slipped. There are no traces of slip on the flat base but this could be due to the erosion that the vessel presents. Fire clouding is present near the base ranging in color from gray (7.5R 5/0) to dark gray (2.5YR 4/8).

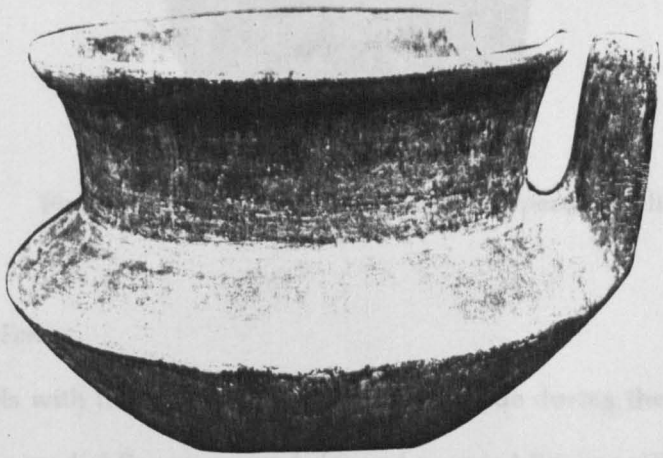


Figure 4.44 A Jar Spouted Vessel in Burial 12-Operation I.

Vase Forms. One vase with vertical walls presents an estimated diameter of 22.5 cm and its height 18.6 cm. The most important characteristic of this vessel is the fluted decoration that resembles the bowl with vertical sides that Adams reports for the Plancha Complex (Adams 1971:Figure 14g; Lowe and Agrinier 1960:94, Plate 28 Figure b). The light reddish brown (5YR 6/4) paste is fine to medium with possible carbonate and iron inclusions. The exterior and interior of the bowl are red (10R 5/8) slipped. Fire clouding occurs in the exterior of the vessel, near the rim, in a white (5Y 8/1), dark olive gray (5Y 3/2) and very dark gray (10YR 3/1). The slip is crackled on most of the vessel probably because of the accumulation of carbonates on the surface. A circumferential line marks the beginning of the flutes at 4.7 cm from the rim and runs parallel 13.6 cm down towards the base. The flutes are irregular in width for some measure .7 or 1.2 cm. The base of the bowl is 14.1 in diameter and it is slipped in the same exterior color (Figure 4.45).

Figure 4.45 A Vase found in Burial 15-Operation VIII.

The Terminal Facet Forms:.

Bowl Forms. Bowls with flared sides continued to be made during the Terminal Facet. Bowls have flared sides, a medial flange, everted rim and rounded lip; or outflaring walls, an everted rim with rounded lip. Bases are slightly rounded. Average diameter of these vessel is 36 cm. Average height of the vessel is 9 cm. Vessel thickness ranges from .4 to 1.1 cm (Figure 4.46).

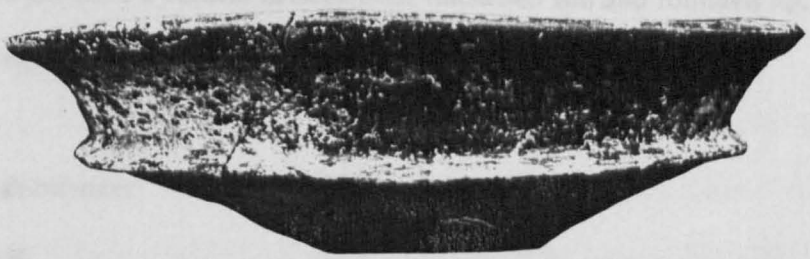


Figure 4.46 One of the Latest Sierra Red: Sierra Variety Forms found in Operation X.

Another form is a large bowl with outflaring walls, an everted rim with rounded lip. Diameter of the vessel is 52 cm. The base is slightly rounded and measures 42 cm in diameter. The height of

the walls is 9 cm and the rim everts 8 cm. Thickness of walls is . 9 cm. Rounded bowls present a direct rim and rounded lip. Bases are slightly incurved.

Plate Form. Plates have flared sides with a direct rim and a rounded lip. Plates present a slightly rounded base. Average diameter is 14. One plate is extremely eroded, but the paste is within Sierra Red: Sierra Variety. Total height of vessel is 2.7 cm. Thickness of vessel varies from .7-1 cm (Figure 4.47).

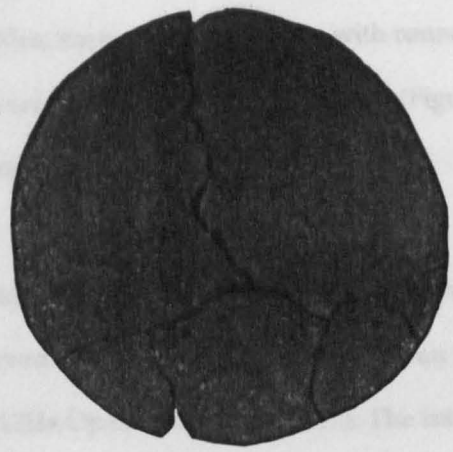


Figure 4.47 An Eroded Rounded Plate of Sierra Red: Sierra Variety.

Jar Forms. Spouted jars have a vertical neck exterior thickened rim and rounded lip. It has a flat base. Diameter of vessel is 10 cm. Diameter of flat base is 6.5 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Sierra Red: Sierra Variety was found in all the operations and at most contexts of the Early, Late and Terminal Facets of the K'atabche'kax Ceramic Complex. A total of nine complete vessels was identified for the Early K'atabche'kax Facet, 23 for the Late Facet, and six for the Terminal K'atabche'kax. In Operation I, Sierra Red: Sierra Variety appears during the construction Phase IV. It is present in a Burials 24 and 27, as well as in pits (Zone 131 and 114). During the Early Facet, Sierra Red: Sierra Variety appeared in various interments. In Operation I, a bowl (Figure 4.31) with incurved-recurved sides exterior thickened rim and partially square lip was found in

Burial 24 (Phase IV-Operation I I-224 Z113B). A bowl with incurved sides and restricted orifice with interior thickened rim and a flat base was part of the offering of Burial 27-Operation I (Phase IV-Operation I I-267 Z135). In Burial 34, a bowl was found with flaring sides and almost horizontal everted rim (Phase V-Operation I I-357 Z152A).

In Burial 19-Operation I, three Sierra Red: Sierra Variety vessels were found as part of the offering. One of these vessels is a spoted jar with incurved sides (Figure 4.32), outflaring neck, an exterior thickened rim and a rounded lip (Phase VII-Operation I I-177 Z100). The second vessel is a bowl with incurved sides: horizontal everted rim with rounded lip (Phase VII-Operation I I-177 Z100). The third vessel was a bowl with rounded sides (Figure 4.30), an interior thickened rim, and incurved base (Phase VII-Operation I I-130 Z103).

For the Late Facet, Sierra Red: Sierra Variety appeared also in the burials of Operation I. Burial 23 had a bowl with incurved-recurved sides (Figure 4.39), an interior thickened rim and slightly incurved base (Phase VIIIa-Operation I I-188 Z107). The interment of Burial 4-Operation I was accompanied by two vessels. One is a dish with outcurved sides (Figure 4.41), everted rim with a rounded lip and a flat base (Phase VIIIb-Operation I I-345 Z38A). The second vessel is a markedly incurved sides bowl restricted orifice (Figure 4.34), with a double collared neck (Phase VIIIb-Operation I I-302 Z38A).

Burial 11-Operation I was interred with a dish with outcurved sides and flat base (Phase VIIIb-Operation I I-32 Z38C). In the same burial, the second vessel was a flared sides bowl with an exterior thickened rim and a rounded lip (Phase VIIIb-Operation I I-32 Z38C 6006 2000). Burial 14-Operation I had a bowl with incurved sides, an everted rim, rounded lip and flat base (Phase VIIIb-Operation I I-76 Z83). Two outcurved sides bowls (Figure 4.37) were also present in Burial 17-Operation I. The bowls have an everted rim and rounded lip and a flat base (Phase VIIIb-Operation I I-173 Z88). A jar spouted vessel (Figure 4.44) with incurved-recurved sides was found in Burial 12 (Phase VIIIc-Operation I I-65 Z80).

Burial 3-Operation I had two vessels. The first vessel is a bowl with outcurved sides (Figure 4.35) with an outflared rim with rounded lip (Phase VIIId-Operation I I-43 Z30a). The second vessel was a bowl with flared sides, an exterior thickened rim with a rounded lip (Phase VIIId-Operation I I-332 Z30a). Burial 15-Operation I had three vessels, two of them were Sierra Red: Sierra Variety (Figures 4.40 and 4.45). One is a bowl with outcurved sides (Phase VIIId-Operation I I-83 Z81). The other vessel is a vase (Phase VIIId-Operation I I-83 Z81).

In Operation XI, it appeared as part of burial contents of the Early Facet. For example, a bowl with flared sides was found in Burial 12 (XI-1163 Z93) and a bowl with incurved-recurved sides in Burial 10 (XI-1171 90A). Burial 6 in Operation XI had two vessels (figures 4.36 and 4.42): a dish with outcurved sides an outflared everted rim (XI-762 Z53) and a bowl has flared sides, an everted rim with a rounded lip (XI-702 Z53).

In Operation XIII, Sierra Red: Sierra Variety is present until the Late Facet, during the construction Phase II. A dish with flaring sides was found in Burial 16 (Operation XIII XII-964 57G). It has an outflared-everted rim with a rounded lip. In Operation XIII, a bowl with flared sides was part of the offering of Burial 12 (Phase IV-Operation XIII XII-904 Z42B). Accompanying this vessel is a bowl with outflared sides, everted rim with rounded lip (Phase IV-Operation XIII XII-904 Z42B). In Burial 10, a bowl (Figure 4.38) with flared sides outcurved-everted rim and rounded lip has 25.5 cm in diameter (Phase IV-Operation XIII XII-892 Z42A).

In Operation VIII, Sierra Red: Sierra Variety occurs in burials. Three Sierra Red: Sierra Variety vessels were interred with Burial 2. The first was a spouted jar (Figure 4.43) with vertical neck Burial 2 (Phase Ia VIII-352 Z8 Sq. G). The second vessel is a bowl with flaring sides (Phase Ia VIII-93 Z8 Sq. G). The third vessel was an outcurved sides dish with an everted rim and rounded lip (Phase Ia-VIII-92 Z8B Sq. G). A cache in Operation VIII contained three vessels. One of them is a Sierra Red: Sierra Variety vase (Figure 4.37) with outcurved sides (Phase Ia VIII-74 Z25). An extremely eroded bowl with outflared sides was found in a cache in Operation X (Phase IV Structures 32-35 and 94 X-1 Z9c). Two plates with flared sides were found in Operation VII (VII-67 Z58).

The complete vessels for the Terminal K'atabche'kax appeared in various contexts, not precisely related to burials as in the earlier facets. Two identical bowls were found in Operation X (Zone 8). These are bowls (Figure 4.46) with outcurved sides and a medial flange (Phase III-Structures 32-35 and 94 X-10 Z8). In Operation VIII, a spouted jar was found within a cache, together with a flared sides bowl (Operation VIII-VIII-359 Z10).

In Operation I, a large bowl with outflaring walls has an everted rim with rounded lip (Phase IX-Operation I I-548 Z236B Sq. E). An eroded rounded bowl with direct rim and rounded lip was found in Zone 17 (Phase IX-Operation I I-117 Z17), together with a plate with flared sides (Phase IX-Operation I I-117).

Inter-site distribution:

Altar de Sacrificios *Plancha* (Adams 1971:21); Becan *Pakluum Chicanel Complex* (Ball 1972:35; Ball 1977a:18); Cerros: *Ixtabai -C'oh-*(Robertson and Freidel 1982:67; 1986:97); Colha *Onecimo and Blossom Bank* (Valdez 1987:127; 1988, 44-45); Cuello *Cocos* (Kosakowsky 1987a:58); Chan Chen, Patchchacan, *Aventura Late and Terminal Formative* (Ball 1983:205, 209, 210, 213); Chiapa de Corzo: *Chicanel-Early Horcones Phase* (Lowe and Agrinier 1960:52); Edzna *Baluartes* (Forsyth 1983:81); Kichpanha *Blossom Bank* (Reese and Valdez 1987:39); Komchen *Late Nabanche/Xculul* (Andrews V 1988:53); Mayapan *Chicanel* (Smith 1971:138); Mirador *Cascabel -Late Preclassic* (Forsyth 1986:21); Moho Cay Late Terminal Formative (Ball 1982:50); Santa Rita Late Preclassic (A. Chase and Chase D. 1987:51); Tayasal-Paxcaman *Kax-Chicanel* (A. Chase 1984:29); Tikal *Tzec* (Culbert 1993:,6); Uaxactun *Chicanel* (Gifford 1963: 27).

Illustration: Figures 4.29-4.47

Type	SIERRA RED
Variety	Unspecified
Established	(Smith and Gifford 1966:163).

	Description at K´axob based on two complete vessels and 4 sherds, representing 0.01% of the K'atabche'kax Ceramic Complex.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Early Facet
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

1) A red (10R 5/8) slip with a waxy feeling covers the surfaces of the vessels. (2) The paste has a fine texture. (3) Incised geometric decoration occurs on the horizontal everted rim. (4) The common forms are a bowl flared sides or with incurved-recurved sides. 5) Effigy vessels are part of the Unspecified Variety.

Paste, Temper and Firing:

The paste is fine textured and has a reddish yellow (5YR 7/8). A gray core (7.5YR 5/0) is very common in most sherds.

Surface Finish or Decoration:

A red (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6) slip with a waxy feeling covers the surfaces of the vessels. Fire clouding occurs in a light gray (10YR 7/2) color. Some vessels of the Unspecified Variety are modeled and incised decorated.

Forms:

Bowl Forms. Bowls with flared sides have a horizontal everted rim. Average height of the vessels is 5.6 cm and the thickness is .8 cm. Bowls with incurved-outcurved sides have a long neck and unsupported spouts. Average height of the vessels is 20 cm. Average diameter is 21 cm. Average height of the neck is 7.5 cm. The rim is horizontal everted.

One spouted vessel is a duck effigy. The spout is on the side opposite the duck's head; the duck's wings spread around the body of the vessel. The color of the surface is within Sierra Red 2.5YR 4/8. Fire clouding occurs in a gray 2.5YR 6/0 and light gray 5YR 7/1. The spout measures 13.5 cm in height and the orifice has .7 cm in diameter. The paste has a fine texture and a reddish yellow 7.5YR 6/6 color (Figure 4.48).

Figure 4.48 The Effigy-spouted Vessel found in Burial 10-Operation XI.

Spouted bowls with incurved-recurved sides and outcurved neck have an exterior thickened rim, rounded lip, and two handles. Average height of vessels 8.1 cm. Average diameter of vessels is 10.6 cm. Average height of the neck is 2.4 cm. Height of the spout is 5.4 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Sierra Red: Unspecified Variety was found only in Operation I in the pit of zone 118 of the Early K'atabche'kax. The duck effigy bowl was found in Burial 10 (XI-1171 90A). Another spouted bowl incurved-recurved sides with outcurved neck was found in Burial 2-Operation I. It has an exterior thickened rim, rounded lip and two handles (Phase IX-Operation I I-149 Z18D).

Inter-site distribution:

Altar de Sacrificios: (Sierra Variety) *Plancha* (Adams 1971:21); Barton Ramie *Barton Creek* (Gifford 1976:85); Isla Cerritos *Xaumito/Chicanel* (Robles 1988:66); Salama Valley *Uc-Regional Ceramic Complex* (Sharer and Sedat 1988:77); Seibal *Cantutse* (Sabloff 1975:77); Mayapan *Tiohusco* (Smith 1971:138-139); Yaxchilan *Yaxek* (López Varela 1989:82).

Illustration: Figure 4.48

Type	SIERRA RED
Variety	Gadrooned
Established	as a variety of Sierra Red by López Varela (1992). Description at K'axob based on 52 sherds, representing 0.18% of the total K'atabche'kax Ceramic Complex and seven partially complete vessels.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Early, Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) A red (10R 5/8; 10R 5/6) slip with a waxy feeling covers most surfaces of these vessels, except that the red slip has been wiped onto vessel surfaces to give a pronounced mottled effect. (2) The decoration is based on encircling raised grooves in the exterior of bowls. (3) The paste is fine and tends to crumble. (4) The most common forms are bowls with vertical, flared or rounded sides.

Paste, Temper and Firing:

The Sierra Red: Gadrooned Variety paste contains probable particles of calcite, iron, and schist. The paste has a crumbly fine texture paste. The color of the paste is light red (10R6/6) or red (10R 4/6).

Surface Finish or Decoration:

The slip color used for these vessels corresponds to the surface finish of Society Hall, except that the slip does not give a streaky effect. The red (5YR 7/8) and the yellow slips (5YR 7/8) were lightened in their consistency. Both slips were mixed up and wiped onto the exterior walls, giving a mottled effect. The interior walls of the vessels were smoothed and covered with a red (10R 5/6, 10R 5/8) color. The exterior walls were also decorated with raised grooves, running horizontally from the rim to the base. The exterior thickened rim was used to give the impression of another groove and most grooves seem to be aligned in a horizontal manner. Raised grooves are irregular in shape, but generally, the grooves measure 1.5 cm in width and are separated by .5 cm. Fire clouding occurs from a very gray dark (7.5YR 3/0) to a strong brown (7.5YR 5/6).

Forms:

Bowl Forms. Bowls with almost vertical walls with a flat base present evidence of fire exposure. The interior and the exterior of the vessel were red (10R 5/6; 10R5/8) slipped. The slip was applied with a mottled effect; although the red tends to degrade into a strong brown (7.5YR 5/6). Fire clouding is present on the exterior part of the vessel, in a very gray dark (7.5YR 3/0) or red (10R 5/8) color.

Two vertical sides bowl indicate a strong standardization for the making of these vessels. In one example, The rim is direct with a rounded lip and always has 26 cm in diameter. The decoration consists of grooves on the exterior that measure 1 cm in width, although they are not as pronounced as the vessels in Operation I. The height of the first vessel is 8.5 cm and the diameter of the incurved base measures 23.5 cm. The weight is 1, 576 gr. In comparison, the second vessel is 8.8 cm in height. The diameter of the base measures 22.8 cm and the weight is 1,524 gr. The measurements between these two vessels differ slightly. This might also indicate a standardization for the making of these vessels (Figure 4.49).

An eroded round bowl has a direct rim and rounded lip. The diameter of the vessel is 17.5 cm. Decoration within the variety, but, each groove is 1 cm in width. It has a flat base with 15 cm in diameter. Thickness of the walls varies from .5 to .7 cm. A bowl with almost vertical sides has a

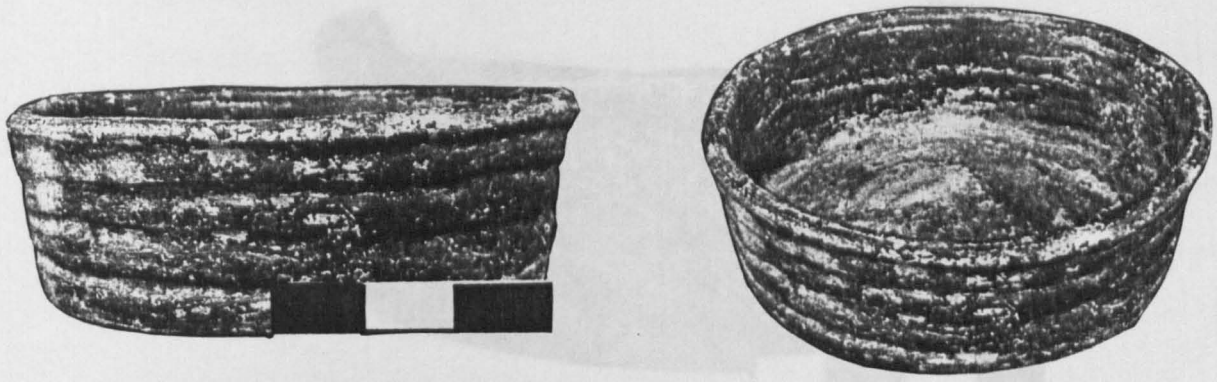


Figure 4.49 Two identical bowls found in Operation I.

Figure 4.50 The Bowl found in Burial 41-Operation I.

beveled-out rim and a flat base. Diameter of the vessel and of the flat base is 16 cm. Decoration within the variety but the grooves are not protruding as in other vessels. Each groove is 1 cm width. Total height of vessel 8.5 cm. Thickness of the vessel is .5-1 cm (Figure 4.50).

One vessel is decorated with five circumferential pre-fired grooves. One of the grooves is formed by the rim that is an exterior thickened rim with a rounded lip. Grooves are irregular in shape and width, measuring from .8 to 1 cm. The grooves are separated irregularly by 5 cm. Diameter of the vessel is 16.6 cm and that of the flat base is 14.6 cm. Total height of the vessel is 5.5 cm and the thickness of the walls measures .8 cm. The vessel weighs 487 gr. (Figure 4.51).

Figure 4.51 One of the rounded bowls found in a cache of Operation VIII.

A bowl with incurved-recurved sides has a direct rim and squared lip (Figure 4.51). The vessels are decorated with five circumferential grooves that start in the middle part of the body, at 7 cm in height from the base. Each groove measures 2.5 and the upper groove helps to form the rim. On each sides of these vessel there is a handle that measures 1 cm in diameter. One example has a total height of 12.5 cm. The base is slightly rounded. Diameter of vessel is 22 cm. Walls vary in thickness from .3 to .7 cm. Weight is 930 gr.

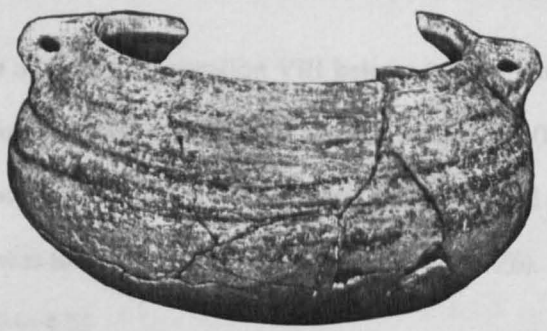


Figure 4.52 The vessel decorated with circumferential grooves found in a cache of Operation VIII.

Inter and Intra-site distribution:

Intra-site distribution:

The Sierra Red: Gadrooned Variety was found on the paleosol Late K'atabche'kax levels of Operation VII. In Operation VII, Sierra Red: Gadrooned Variety is also present in the Terminal K'atabche'kax levels. It appeared in the fill levels of Zone 2, on the floor of zone 21. In Operation I, Sierra Red: Gadrooned Variety was part of Burials 41 and 6. In Operation VIII, the fragments were contained in a cache (Zone 25) of the Late K'atabche'kax and in a midden (Zone 15). In Operation X, Sierra Red: Gadrooned Variety was found in a midden context (Zone 11). In Operation XI, Sierra Red: Gadrooned Variety is also present on a floor (Zone 3) of the Terminal K'atabche'kax. During the Late K'atabche'kax, Sierra Red: Gadrooned Variety was contained in a pit (Zone 16).

In Operation I, the Gadrooned Variety was found in burials and caches. A bowl (Figure 4.50) with almost vertical sides was found in Burial 41 (Phase VIIId-Operation I I-103 Z41 Burial 41A). A cache found in Zone 77-Operation I had two almost identical vessels (Figure 4.49). The first one is a bowl with vertical walls and a flat base, presenting evidence of fire exposure (Phase VIIIc-Operation I I-25W Z77). The second vessel has the same characteristics of the western vessel (Phase VIIIc-Operation I I-25E Z77). In Burial 6, the bowl presents a beveled-out rim (Phase VIIId-Operation I I-304 Z42).

Three vessels found in a cache at Operation VIII belong to this Variety. One is a bowl (Figure 4.52) with incurved recurved sides with a direct rim and square lip. (Phase Ia VIII-75 Z25B Sq. A). The other two vessels were bowls (Figure 4.51) with almost vertical sides (Phase Ia VIII-75 Z25B Sq. A). Another vessel was found in Burial 1 (Phase Ia VIII-341.2 Z6).

Illustration: Figures 4.49 to 4.52

Type	PULETAN RED-AND-UNSLIPPED
Variety	Puletan
Established	Cuello (Pring 1977a). Description at K´axob based on one fragment.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Late Facet
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

1) A red (10R 5/8) slip with a waxy feeling covers the surfaces of the vessels. (2) The paste has a fine texture. (3) Half of the vessel is red slipped with finger nail impressions and the other half of the vessel is unslipped. (4) The common form is a bowl with incurved-recurved sides.

Paste, Temper and Firing:

The paste is fine textured and has a reddish yellow (5YR 7/8). It is common to appreciate a gray core (7.5YR 5/0).

Surface Finish or Decoration:

The vessel is red slipped from the lip to the recurving part of the vessel. Finger nail impressions, in a circumferential band, decorate the vessel near the rim (Figure 4.53).

Figure 4.53 The Puletan Red-and-Unslipped: Puletan Vessel.

Forms:

Bowl Forms. The only identified form is a bowl with incurved-recurved sides, and a direct rim with a rounded lip. Diameter of the vessel is 24 cm and the thickness varies from .5 to 1 cm.

Inter and Intra-site distribution:

Intra-site distribution:

A partially complete bowl was found in a sherd-lined pit (Zone 88) in Operation XI.

Inter-site distribution:

Cuello: Cocos (Kosakowsky 1987a:73).

Illustration: Figure 4.53

Type	SOCIETY HALL
Variety	Society Hall
Established	It was originally reported as a variety of Sierra Red (Smith and Gifford 1966:163). Description at K´axob based on 1374 sherds, representing 4.68% of the total K'atabche'kax Ceramic Complex, and 12 partially complete vessels.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) A red (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6) slip with a waxy feeling covers most surfaces of these vessels, except that the red slip has been wiped onto vessel surfaces to give a pronounced horizontal streaky effect. (2) The paste is fine and tends to crumble. (3) The most common forms are bowls with vertical, flared, outcurved, rounded, incurved and incurved recurved sides.

Paste, Temper and Firing:

probably, the paste contains particles of calcite, iron, and schist. The paste has a crumbly fine texture paste. The color of the paste is light red (10R6/6) or red (10R 4/6). It has a pink (7.5YR 7/4) or gray (7.5YR 5/0) core with a width of 2-3 mm; however, most of the sherds do not present a core.

Surface Finish or Decoration:

Surfaces are smoothed and covered with a red (2.5YR 5/6) slip color, as to produce streaky horizontal variations. The streaky effect was achieved by first applying a red base, that once it was partially dried, a second red (10R 4/8) or light red (10R 6/8) wash was added with a brush. The second red slip was applied in concentric applications, producing the streaky effect, on both the interior and exterior of vessels. The slip was applied to the interior of the vessels and to the exterior of the lip, but the exterior walls were sometimes, left unslipped. In some examples, the outflared-everted rim was decorated by three incised elements that resemble eyebrows or half moons.

A painted cross is typical of the outflared sides bowls on both interior and exterior of vessels. The cross appears on the floor and the arms continue on the walls. On one example, a circle was painted at the crossing point of the arms, and outlined by four dots, forming a quadrangle. A painted cross is most commonly painted on the flat base.

Forms:

Bowl Forms. Bowls with slightly vertical sides, direct rim, rounded lip, and a flat base occur rarely, within the form divisions of Society Hall: Society Hall. These bowls, however, present 18.7 cm in diameter and a height of 7.5 cm. Thickness of walls ranges from .4 to .8 cm. The diameter of the base measures 15 cm. One example with a direct rim and rounded lip has a flat base with a 10.8 cm in diameter. Diameter of this vessel is 13.5 cm.

Bowls with flared sides present a direct rim and rounded lip. A slightly incurved base is associated with these vessels. Average height is 11.6 cm. Average diameter of the vessel is 54 cm.

Diameter of base is 30 cm. Thickness of the vessel is 1-1.5 cm. A bowl with flaring sides, found in a cache in Operation X, has a direct rim and rounded lip. The vessel is extremely eroded due to carbonate accumulations. The red (2.5YR 5/8) color of the paste predominates on the whole vessel, although a very pale brown (10YR 7/3) color also occurs. It was possible to detect a grayish brown core (2.5Y 5/2) of .5 cm width. The diameter of the vessel is 41 cm. Height of the vessel is 10.5 cm. The rim projects 16.6 cm with an angle of 45°. Vessel thickness varies from .7 to .9 cm (Figure 4.54).

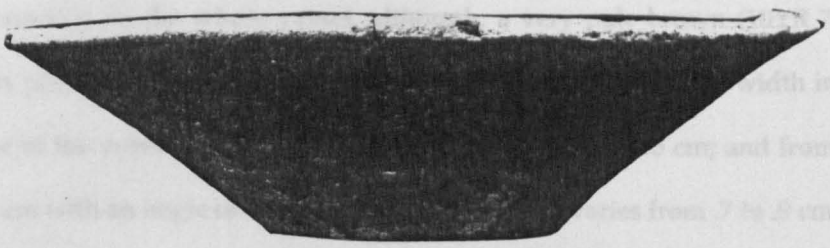


Figure 4.54 The vessel found in a Cache of Operation X, close in form to Aguacate Orange: Aguacate Variety.

A very abundant form is a bowl with outcurved sides, a direct rim, and rounded lip. The diameter in this form ranges from 52 to 54 cm. The slip was applied in a streaky form and easily noticeable only in the interior, but not in the exterior due to fire clouding. The color of the slip in the interior is red (2.5YR 5/6) and light red (2.5YR 6/8). The exterior color is reddish yellow (5YR 6/6) or very dark gray (7.5YR 3/0). The base is convex and slipped with differential firing in the same colors. The paste is extremely porous due to its poor preservation so the paste very easily crumbles. In some examples, the bowls with flared sides direct rim and rounded lip present a flat base, measuring 10.8 cm in diameter or a slightly incurved base, with 30 cm in diameter. Thickness of walls varies from 1 to 1.5 cm.

Bowls with outcurved sides, an outflared everted rim, and rounded lip are very abundant. These bowls have an estimated diameter varying from 21 to 43.2 cm. Height of vessels ranges from 8.5

to 17.7 cm. The rim starts flaring at a ranging height from 7.5 to 10.3 cm. It extends from 4.7 to 7.4 cm. The diameter of the flat base measures from 14.5 to 31 cm. The same form is associated to an incurved base, having 31 cm in diameter. Thickness of walls ranges from .8 to 1 cm.

Two bowls with outcurved sides, direct rim, rounded lip and a flat base share identical measurements. Diameter of both vessels is 18.7 cm. The height of the walls is 7.5 cm. The diameter of flat base in one example measures 14.6 cm and in the other vessel 15 cm. The weight for both vessels is 647 gr. Thickness of walls is .4-.8 cm. Bowls with outcurved sides, direct rim and rounded lip, carbonates accumulations are present; therefore, the red (2.5YR 5/8) color of the paste predominates on the whole vessel, although, a very pale brown (10YR 7/3) color also occurs. It was possible to detect a grayish brown core (2.5Y 5/2) of .5 cm width in some sherds. The diameter of the vessel is 41 cm. The height of the walls is 10.5 cm; and from here, the rim extends 16.6 cm with an angle of 45°. The thickness of walls varies from .7 to .9 cm. Flared bowls have a beveled-in lip that measures 19 to 21 cm in diameter and has the same thickness as the rest of the flared sides bowls.

Another bowl with outcurved sides has a flat base and an outflared everted rim with a rounded lip. Total height of this vessel is 16 cm. The outflared everted rim projects at a height of 11 cm and extends 9 cm with an angle of 45°. On the exterior part of the flat base, the vessel was decorated with a streaky painted cross band. The flat base measures 26.3 cm in diameter. One band measures 23 X 2.5 and the second one 2.5 X 20 cm. The smaller band crosses the large one at 13.5 cm. The potter tried three times to obtain the two perforations that are separated by 11 cm. The third perforation that never pierced the vessel is separated from the successful one by 2.5 cm. The total weight of the vessel is 437 gr (Figure 4.55).

A partially complete outcurved-sided bowl has an outflared-everted rim with rounded lip. The rim is outflaring at 7.5 cm and everts 6.1 cm. Total height of the vessel is 15 cm. Diameter of vessel is 42 cm. The base is flat and has 30 cm in diameter. Thickness of the vessel ranges from .8 to 1 cm. One outcurved sides bowl presents an outflared everted rim with rounded lip. The rim is

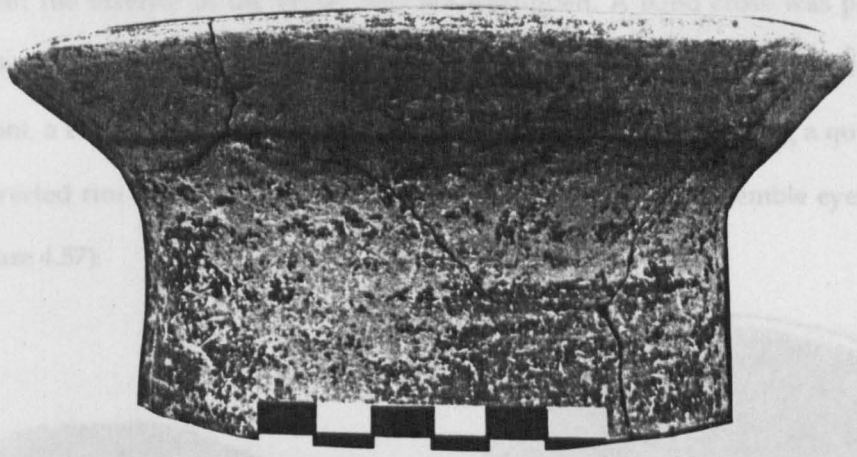


Figure 4.55 The Society Hall: Society Hall Vessel found in Burial 13.

Figure 4.56 The Society Hall: Society Hall Vessel found in Operation I.

outflaring at 8 cm and everts 4.7 cm. The base is flat and measures 14.5 cm. Total height of vessel 11.9 cm. Diameter of vessel is 23.7 cm (Figure 4.56).

An outcurved sided bowl has an outflared everted rim with rounded lip. The rim is outflaring at 8.5 cm and everts 5.5 cm. The base is flat and measures 14 cm. Total height of vessel 23 cm. Diameter of the vessel is 23.7 cm. A band cross was painted on the exterior base. Another outcurved sided bowl presents an outflared everted rim with rounded lip. The rim is outflaring at 8.5 cm and everts 7.4 cm. The base is flat and measures 31 cm. Diameter of vessel is 43.2 cm.

Total height of vessel 17.7 cm. The slip was applied to the interior of the vessel and to the exterior of the lip, but the exterior of the vessel was left unslipped. A band cross was painted on the bottom of the vessel, but the arms of the cross continued to be painted onto the walls. At the crossing point, a circle was painted and it was outlined by four dots, forming a quadrangle. The outflared everted rim was decorated by three incised elements that resemble eyebrows or half moons (Figure 4.57).

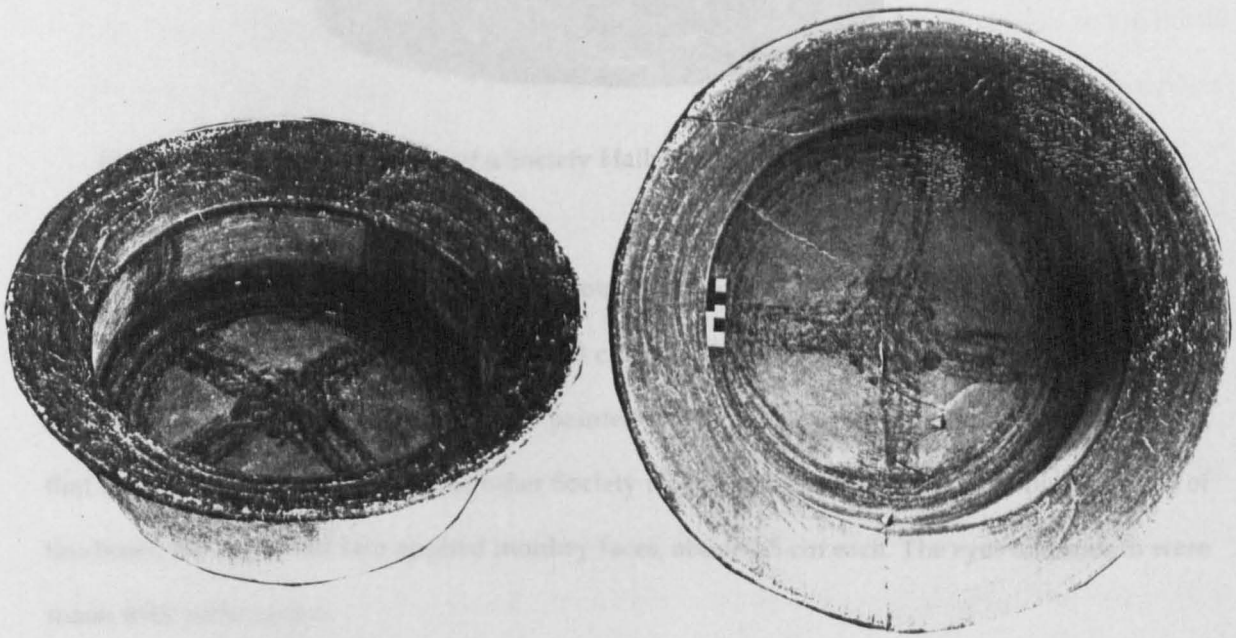


Figure 4.57 The Society Hall: Society Hall Vessels found in Burial 18 with the Crossed Band.

A bowl with outcurved sides has direct rim and rounded lip. Diameter of vessel is 52 cm. The slip was applied to the interior of the vessel and to the exterior of the lip, but the exterior walls are unslipped.

A partially reconstructable outcurved sided bowl has an outflared everted rim with rounded lip. The rim is outflaring at 10.3 cm and everts 5.5 cm. The base is flat and measures 16 cm. Diameter of the vessel is 30 cm. A band cross was painted on the exterior base (Figure 4.58).

A less abundant form is a rounded bowl with direct rim and rounded lip. It has a slightly incurved base, with 16 cm in diameter. The same form has 30 cm in diameter. Vessel thickness measures .7 cm.

Figure 4.58 Another Example of a Society Hall: Society Hall Vessel found in Operation I.

A partially complete incurved bowl with outflared neck has a horizontal everted rim with rounded lip. The diameter of the vessel is 20 cm. The height of the neck is 4 cm. The base is flat and measures 9.5 cm in diameter. It has a painted stroke, crossing the base, similar to the strokes, that form the crosses found in some other Society Hall: Society Hall Vessels. On opposite sides of this bowl, the vessel has two applied monkey faces, about 2.5 cm each. The eyes and mouth were made with perforations.

A partially complete incurved-recurved sides bowl has a horizontal everted rim with rounded lip. The rim extends 1.8 cm and has two incised lines. The diameter of the vessel is 22.3 cm. The rim extends 1.8 cm and has two incised lines. One measure .1 cm and the second one, that is closest to the lip, is .5 cm in width.

Inter and Intra-site distribution:

Intra-site distribution:

Society Hall: Society Hall is present in most structures, except Operation XIII and Operation XII. Society Hall: Society Hall appeared in all the contents of Operation VII for the Terminal and Late K'atabche'kax Facets. Society Hall: Society Hall was part of the construction fill (Zone 2) and the fill contents of several postholes of the Terminal Facet.

In Operation VIII, Society Hall: Society Hall was present in most contexts. It is restricted to the Late K'atabche'kax Facets. In Operation X, Society Hall: Society Hall appeared as part of Burials 2 and 3, in fill contents (Zone 3), in a hearth (Zone 6a), on the patio floor (Zones 5 and 8), and in a midden deposit (Zone 11). Society Hall: Society Hall bowl was part of the contents of Burial 1 (Phase Ia VIII-341A Z6).

Society Hall: Society Hall was present in very small quantities, in the Early K'atabche'kax levels of Operation X. A bowl with flaring sides was found in a cache (Phase IV X-16 Z9a). In Operation XI, Society Hall: Society Hall was present on a floor (Zone 2), in a construction fill (Zone 4), in Burial 2, in pits (Zone 12 and 16), and in a cache (Zone 11) of the Terminal Facet. During the Late K'atabche'kax Facet, in Operation XI, it was found in the construction levels of Zone 18, in a pit (Zone 20).

In Operation I, Society Hall: Society Hall was found only in Late K'atabche'kax levels. Mainly, Society Hall: Society Hall was found on floors (Zone 10 and 22); in Burials 15, 16, 3, 12, 13 and 11; in a pit (Zone 41); in construction fill (Zone 46); in middens (Zone 90 and 87). Two Society Hall: Society Hall bowls with flared sides were in a cache (Phase VIIIc-Operation I I-18N and I-18S Z77), in association with two Sierra Red: Gadrooned Variety vessels. A bowl with flared sides was found in Burial 13 (Phase VIIIc-Operation I I-35 Z78). This form is very common (Operation I I-206 Z18).

During the Terminal K'atabche'kax, the outcurved sides bowl still has outflared everted rim with a rounded lip (Phase XI-Operation I I-107 Z9). Four partially reconstructable vessels were found in Burial 18. An outcurved sided bowl has an outflared everted rim with rounded lip (Phase XI-Operation I I-125A Z 18a). A second outcurved sided bowl presents an outflared everted rim with rounded lip (Phase XI-Operation I I-125A Z 18a). A partially complete incurved sides bowl with outflared neck has a horizontal everted rim with rounded lip (Phase XI-Operation I I-125 Z18a). A bowl with outcurved sides has direct rim and rounded lip (Phase XI-Operation I I-206 Z18). Bowls with flared sides are still used during the Terminal Facet (Phase IX-Operation I I-122

Z18; Phase IX-Operation I I-123 Z15). A partially incurved-recurved sides bowl presents a horizontal everted rim with rounded lip (Phase IX-Operation I I-284 Z15g).

Inter-site distribution:

Barton Ramie *Barton Creek* (Gifford 1976:90); Colha: *Onecimo Blossom Bank* (Valdez 1987:115; 1988:44-45); Cerros: *Ixtabai -C'oh* (Robertson and Freidel 1982:67; 1986:97); Cuello *Cocos* (Kosakowsky 1987a:64); Kichpanha *Blossom Bank Late Facet* (Reese and Valdez 1987:40); Tikal *Chuen* (Culbert 1993:8-9); Uaxactun *Chicanel* (Smith and Gifford 1966:163).

Illustration: Figures 4.54-4.58

Type	SOCIETY HALL
Variety	Society Hall Impressed
Established	as a variety of Society Hall by (López Varela 1992). Description based on 3 sherds, representing 0.01% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) A streaky red (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6) slip with a waxy feeling covers the surfaces of these vessels. (2) The paste is fine and tends to crumble. (3) The only form is a bowl with incurved-recurved sides.

Paste, Temper and Firing:

The Sierra Red paste contains probable particles of calcite, iron, and schist. The paste has a crumbly fine texture paste. Color of the paste is light red (10R6/6) or red (10R 4/6). The paste has a pink (7.5YR 7/4) or gray (7.5YR 5/0) core with a width of 2-3 mm.

Surface Finish or Decoration:

Surfaces are smoothed and covered with a red (2.5YR 5/6) slip color, as to produce streaky horizontal variations. The streaky slip was applied in concentric applications, on both the interior and exterior of vessels. The slip was applied to the exterior of the lip. The medial flange is decorated with finger nail impressions, with applications, or sometimes the flange is modeled (Figure 4.59).

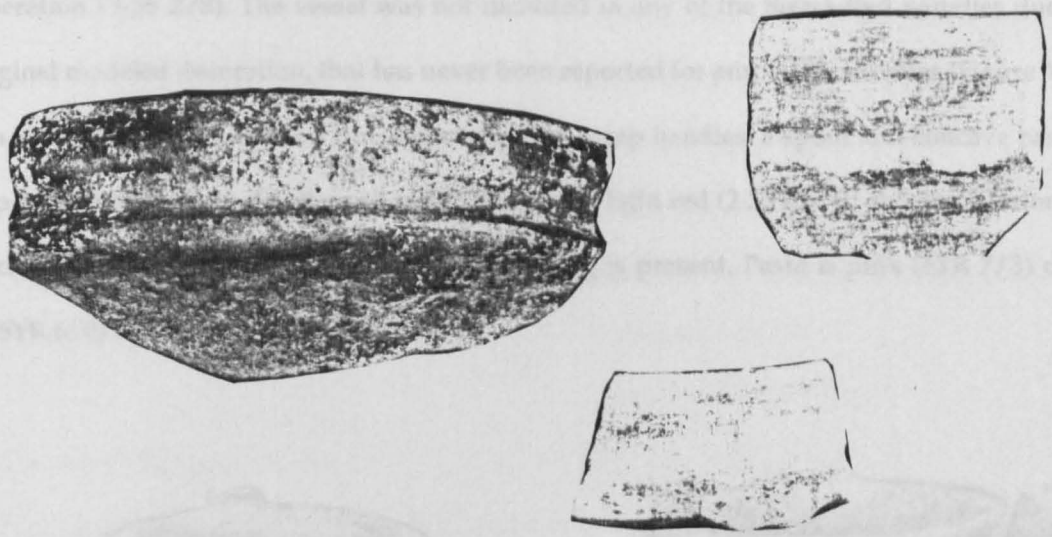


Figure 4.59 Fragments of Society Hall: Society Hall Impressed.

Forms:

Bowl Forms. Bowls with slightly incurved-recurved sides, present a direct rim, rounded lip. The vessel presents a medial flange decorated with with applications or finger nail impressions, directly on the flange. Average diameter of the vessels varies from 22 to 34 cm. Thickness of vessels ranges from .5 to .7 cm.

Inter and Intra-site distribution:

Intra-site distribution:

One fragment was found on Burial 2 (Operation X). The type occured on a plaster floor (Zone 9) and in a pit (Zone 20) of Operation XI.

Illustration: Figure 4.59

OTHER SIERRA RED GROUP VESSELS

According to its ceramic attributes, the Spouted Effigy jar belongs to the Sierra Red group (VIIIc-Operation I I-35 Z78). The vessel was not included in any of the Sierra Red varieties due to its original modeled decoration, that has never been reported for any of the varieties (Figure 4.60). It is a jar with a slightly everted rim, square lip, two strap handles, a spout and concave base. The slip color of the vessel is yellowish red (5YR 5/8) or light red (2.5YR 6/8) and the interior of the neck is slipped in this last color; also fire clouding is present. Paste is pink (5YR 7/3) or gray (7.5YR 6/0) and has a medium texture.

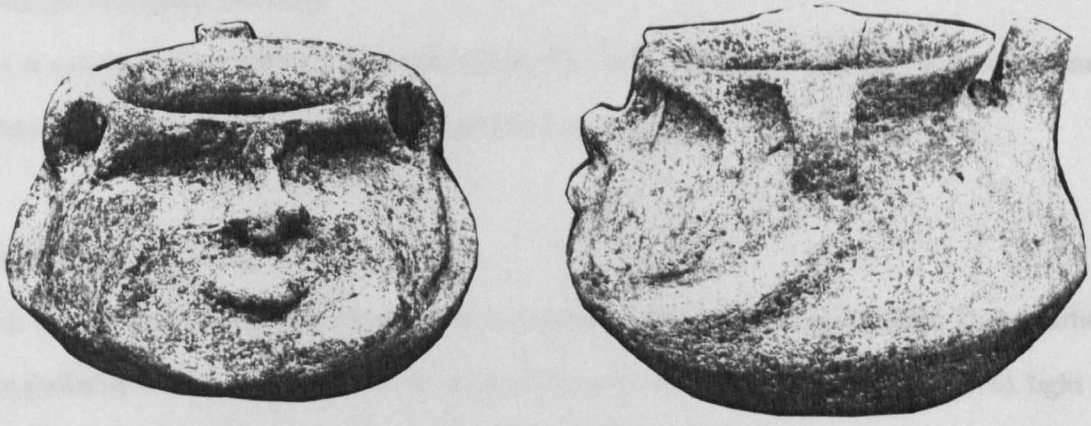


Figure 4.60 The Effigy Jar found in Operation I.

Opposite to the spout, there is an effigy modeled face that covers the vessel. The eyebrows were formed by the rim occupying an area of 13 X 9 X 8.5 cm. The two strap handles vary in size. One has a width of 2.5 to 2 cm and the other one is a larger for it measures 2 to 2.5 cm. The total height for the strap handles is 3.6 cm. The spout has a height of 3.5 cm and the orifice has a diameter of 2

cm. Generally, the vessel has a height of 13.5 cm, a diameter of 11 cm. The height of the neck is 1.6 cm and the diameter of the base measures 14 cm. The total weight of the vessel is 780 gr.

Type	HILLBANK RED
Variety	Hillbank
Established	Barton Ramie, (Gifford 1976:101). Description at K´axob based on 510 sherds, representing 1.74% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Unspecified by Gifford (1976:101)
Ware	Gale Creek Red
Ceramic Complex	K'atabche'kax Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) A red waxy slip (10R 5/5; 10R 4/6) covers the surface of the vessels. (2) The paste is fine in texture. (3) The main forms are thin walled bowls or jars.

Paste, Temper and Firing:

It is a finely textured paste with probable inclusions of schist, calcite and quartz. These particles are probably added as temper, due to its size. The color of the paste is red (2.5YR 5/6), light red (2.5YR 6/8), very pale brown (10YR 7/4), or light yellowish brown (10YR 6/4). There is no evidence of core formation in the sherds.

Surface Finish or Decoration:

The red waxy slip (10R 5/5; 10R 4/6) presents a well smoothed and lustrous surface. The slip in this type is duller, even though it resembles the Sierra Red one. Fire clouding occurs on the surfaces turning the red slip into a gray (2.5YR 6/0) or pinkish white (7.5YR 8/2).

Forms:

Jar Forms. Jars have an estimate diameter varying from 11 to 24 cm. Jars have a slightly vertical neck with a direct rim and rounded lip or with an exterior folded rim (Figure 4.61). The base is rounded on most jars. Thickness of these vessels measures from .4 to .5 cm.

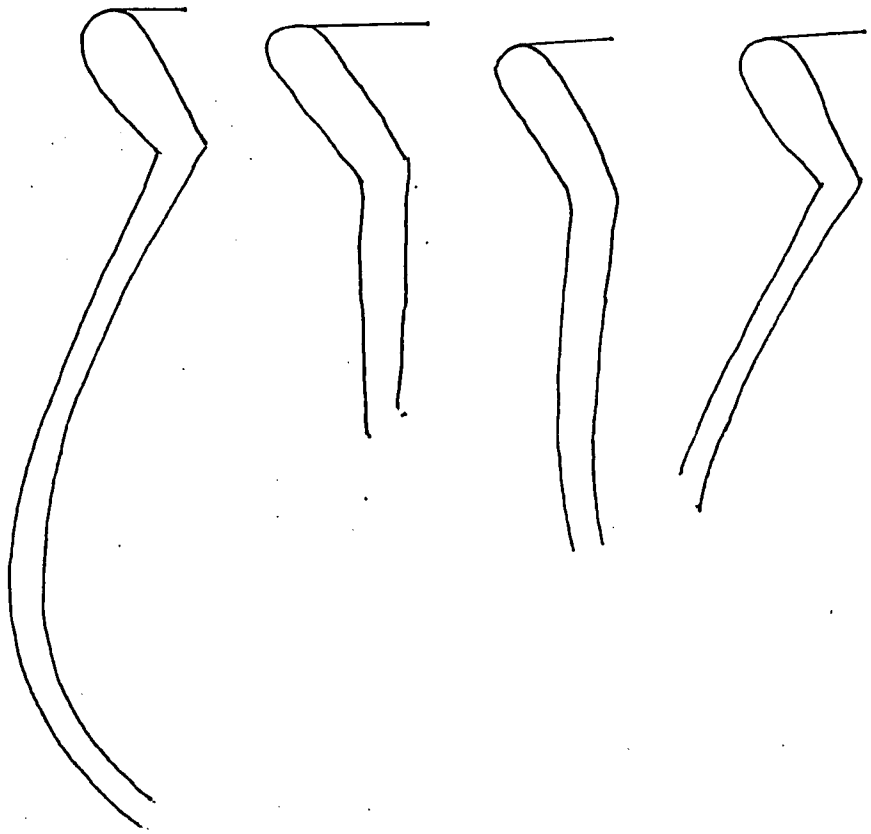


Figure 4.61 The Jar Rims of Hillbank Red: Hillbank Variety.

Inter and Intra-site distribution:

Intra-site distribution:

Hillbank Red: Hillbank is present in the Terminal K'atabche'kax fills of Operation VII. It is totally absent in Operation I. In Operation VIII, Hillbank Red: Hillbank was found on a floor (Zone 2) and in pits (Zone 5 and 12). In Operation X, Hillbank Red: Hillbank occurred in construction fill (Zone 4), in Burial 4, and in a cache (Zone 11). Hillbank Red: Hillbank, as well as Society Hall, is absent in Operation XIII and Operation XII.

Inter-site distribution:

Colha *Onecimo* (Valdez 1987:118; 1988:44)

Illustration: Figure 4.61

Type	UNION APPLIQUED
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:70). Description at K'axob based on 10 sherds, representing 0.03% of the total K'atabche'kax Ceramic Complex.
Ceramic Group	Sierra
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Late Facet
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) A circumferential appliqué fillet decorates the exterior of vessels.

Paste, Temper and Firing:

The Sierra Red paste contains probable particles of calcite. The paste is fine in texture and has a red (2.5YR 5/8; 2.5YR 4/6) or yellowish red (5YR 5/6) color.

Surface Finish or Decoration:

The fillet around the exterior of the vessels varies in width from .9 to 1.4 cm. A braided fillet is decorated with deep dot punctations, that could have been made with a reed.

Forms:

Bowl Forms. Fragments belonging to a possibly rounded bowl were slipped on both surfaces. No rims were identified; but thickness of the walls varies from .8 to .9 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Union Appliqued: Unspecified Variety was found in Operation VII and Operation XI. In Operation VII, the Union Appliqued: Unspecified Variety was part of the fill construction. In

Operation I, it occurred in a midden (Zone 87). In Operation XI, Union Appliquéd: Unspecified Variety was found on a floor (Zone 2), as part of the construction fill (Zone 10 and 16). Union Appliquéd: Unspecified Variety occurred until construction Phase IVc of Operation XI, together Society Hall: Society Hall and Hillbank Red: Hillbank.

Inter-site distribution:

Cerros *Ixtabai* (Robertson and Freidel 1982:67); Colha: Onecimo *and Blossom Park* (Valdez 1988:45); Cuello *Cocos* (Kosakowsky 1987a:72); Mirador *Cascabel-Chicanel* (Forsyth 1986:27); Uaxactun *Chicanel* (Gifford 1963:27).

Illustration: No figure provided.

Type	POLVERO BLACK
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:161). Description based on 2 fragments, representing 0.01% of the K'atabche'kax Ceramic Complex.
Ceramic Group	Polvero
Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Early, Late and Terminal Facets
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) A very dark gray waxy slip (7.5YR 3/0) was applied to the surfaces. (2) The paste has a fine texture.

Paste, Temper and Firing:

The paste has a very dark brown (10YR 2/2) color and a fine texture.

Surface Finish or Decoration:

The surfaces are well smoothed and covered with a black color (2.5YR 2.5/0). The decoration consists of circumferential incisions, near the rim.

Forms.

The only identified form are dishes or bowls, with a direct rim and rounded lip, unfortunately, the rim fragments are too small, to take an accurate measurement of the diameter. Thickness of walls is .7 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Polvero Black: Unspecified Variety was found in a construction fill of Operation VII (Zone 41). In Operation X, Polvero Black: Unspecified Variety appeared in a fire pit (Zone 17b).

Inter-site distribution:

Altar de Sacrificios *Plancha* (Adams 1971:24); Barton Ramie *Barton Creek* (Gifford 1976:96); Becan *Pakluum* (Ball 1977a:30); Colha *Onecimo* (Valdez 1987:117; 1988:44); Chan Chen *Late and Terminal Formative* (Ball 1983:205); Edzna *Baluartes* (Forsyth 1983:81); Mirador *Cascabel -Chicanel* (Forsyth 1986:36); Piedras Negras *Nab* (Holley 1986); Quintana Roo *Chicanel* (Fry 1972); Seibal *Cantutse* (Sabloff 1975:87); Tayasal-Paxcaman *Kax-Chicanel* (A. Chase 1984:30); Tikal *Tzec-Chuen-Cauac-Cimi* (Culbert 1993:8-10) Yaxchilan *Yaxcab* (López Varela 1989:79); Uaxactun Chicanel (Gifford 1963:27).

Illustration: No figure provided.

Type	REPOLLO IMPRESSED
Variety	Unspecified
Established	Becan (Ball 1977a:92). Description at K'axob based on 3 sherds, representing, 0.01% of the K'atabche'kax Ceramic Complex.
Ceramic Group	Sierra

Ware	Paso Caballo Waxy
Ceramic Complex	K'atabche'kax Late Facet
Ceramic Sphere Affiliation	Chicanel

Principal Identifying Attributes:

(1) The red (10R 5/8) slip with a waxy feeling is highly eroded. (2) The description is based on the reed impressions made, apparently, near the rim.

Paste, Temper and Firing:

The paste is fine and compact, although granular, and with a red (2.5YR 5/8; 2.5YR 4/6) color.

Surface Finish or Decoration:

Decoration consists of haphazard reed impressions occurring near the neck juncture. It is common to find impressions near the rim. The impressions measure from .6 cm to 1.2 in diameter.

Forms:

No specific form was identified, although the 3 sherds could belong to a jar.

Inter and Intra-site distribution:

Intra-site distribution:

Repollo Impressed: Unspecified Variety distribution was restricted to Operation I. It was part of the contents of Burial 15.

Inter-site distribution:

Becan *Acachen* (Ball 1977a:92); Colha *Onecimo and Blossom Park* (Valdez 1988:45); Cuello *Cocos* (Kosakowsky 1987a:72)

Illustration: No figure provided.

UNNAMED USULUTAN GROUP.

Unnamed Red-on-Orange (Sabloff 1975:97)

Description is based on 6 sherds at K'axob, representing .02% of the total complex. Fragments were found only in Operation VII and in Operation X. In Operation VII, it was part of construction fill (Zones 38, 57); and a pit (Zone 74). The most important characteristic of this group of sherds is a straight or wavy line decoration in a "resist" slipped style. The paste has a medium texture with probable fine calcite grains and probably schist. The color of the paste is brown (10YR 5/3) or brownish yellow (10YR 6/6). A core is partially formed with the same range color and measures .5 cm width.

Crackling of the waxy slip is evident on both surfaces. The slip color on the exterior is grayish brown (10YR 5/2) or light brown (7.5YR 6/3). slip on the interior is red (2.5YR 4/6; 2.5YR 5/8) or dark red (2.5YR 3/6). Decoration is generally on the vessel interior dark reddish brown (2.5YR 3/4) or very dark gray (7.5YR 3/0). These wavy painted lines are an imitation of the Usulutan ceramics. Unfortunately, no rims were obtained, but probably these sherds belong to large flaring sides bowls (Figure 4.62).

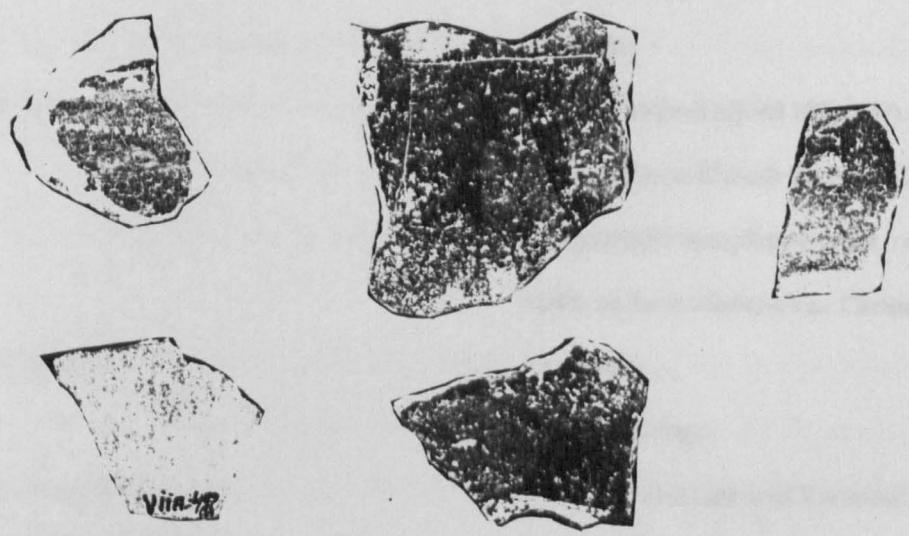


Figure 4.62 Fragments of Unnamed Red-on-Orange.

UNNAMED ORANGE-ON-CREAM

The identification of this type is based on 29 rim sherds, representing 0.10% of the total complex. The type was present in Operation VII. It was found in Burial 1, in construction fills (Zone 50 and 57), in a fire pit (Zone 53), and on a floor (Zone 52).

The yellowish red (5YR 5/6) paste has abundant large particles of what seems to be quartz. The paste has a fine texture and no core is evident. The decoration is limited to a red (2.5YR 5/8) or reddish yellow (5YR 7/8) band, either in the interior or the exterior of the rim. The band was applied to a preliminary white (10YR 8/2) slip coat on both sides of the sherd. Fire clouding appears on the surfaces ranging from white (7.5YR 8/0); gray (7.5YR 5/0) to dark gray (7.5YR 4/0).

The distinguished forms are bowls with a direct rim and rounded lip. The diameter of the vessel is 29 cm. Thickness of walls varies from .7 to .9 cm. Another form is a jar, but the material is too fragmented to take any measurements.

Illustration: No figure provided.

Type	AGUACATE ORANGE
Variety	Aguacate
Established	Barton Ramie (Gifford 1976:129). Description at K´axob based on 26 sherds and five partially complete vessels, representing 0.09% of the K'atabche'kax Ceramic Complex.
Ceramic Group	Aguacate
Ware	Holmul Orange
Ceramic Complex	K'atabche'kax Late and Terminal Facets
Ceramic Sphere Affiliation	Floral Park

Principal Identifying Attributes:

(1) Red (2.5YR 4/6) dull slip covers the surfaces of these vessels. (2) The paste is of a medium texture. (3) The most common forms are dishes and bowls with rounded sides, direct rim and rounded lip with tetrapod mammiform feet.

Paste, Temper and Firing:

The paste is reddish yellow (5YR 6/6) and has a medium texture, due to probable abundant particles of quartz, schist, carbonate, and sand.

Surface Finish or Decoration:

The red (2.5YR 4/6) dull slip was well applied to the slightly smoothed surfaces. Rootlet marks are evident on the surfaces. Differential firing is present on the exterior surfaces, in a very dark gray (10YR 3/1) color. The slip tends to crack on the surface and can be easily scratched off. Bowls are slipped on the interior and the exterior.

Forms:

Dish Forms. Dishes with rounded sides, direct rim with rounded lip or exterior rim thickening are very abundant. Dish rim diameters vary from 18 to 46 cm. Vessel thickness measures from .5 to 1 cm. Bases are rounded with large tetrapod and hollow or rattled mammiform feet, with flattened teat nubbins. Tetrapod supports include hollow hemispherical mammiform feet or solid nubbin feet. The feet are about 7.5 cm in diameter with a height of 6.5 cm. The feet with flat base have opposing drop form holes or vertical slits.

Bowl Forms. Bowls with rounded sides have a direct rim and rounded lip, with hollow mammiform feet. Average diameter of these vessels varies from 40.5 to 44 cm. A bowl with round sides, direct rim and a slightly folded rim has 36 cm in diameter. Total weight of the vessel is 1, 635 gr. The interior of the bowl is red slipped (2.5YR 5/8). The exterior is not slipped. Vessel thickness varies from .6 to .7 cm (Figure 4.63).

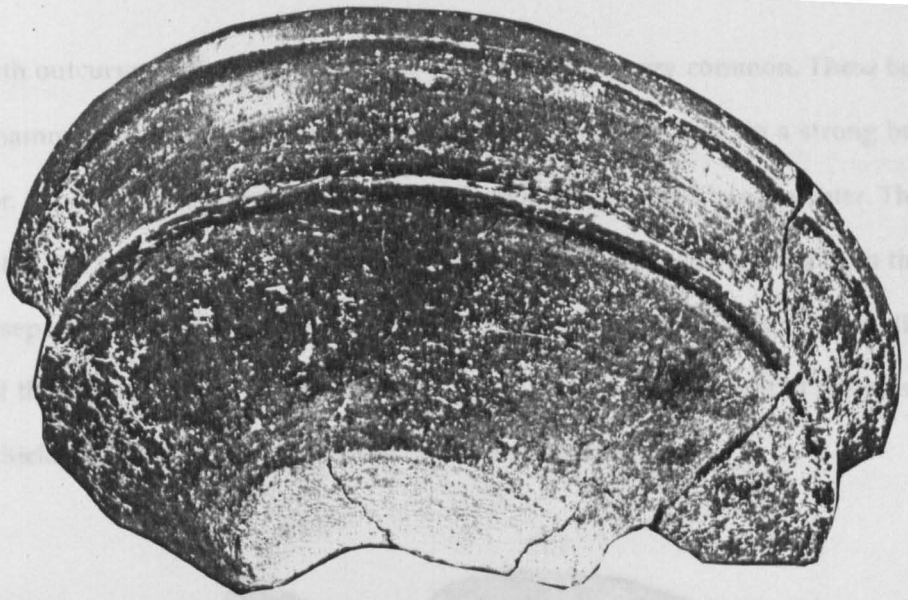


Figure 4.63 An Example of an Aguacate Orange: Aguacate Variety Vessel.

Another example, with a slightly folded rim, has 32 cm in diameter. The height of the vessel is 10 cm. Thickness of sides varies from .6 to .7 cm. A bowl with round sides and solid conical feet has 38 cm in diameter. The feet are 2 cm in height. Thickness of walls varies from .5 to .7 cm (Figure 4.64).

Figure 4.64 An Example of an Aguacate Orange: Aguacate Variety vessel found in Burial 3-OperationXII.

Bowls with outcurved sides, direct rim and rounded lip are very common. These bowls present hollow mammiform feet. Differential firing is present near the base, in a strong brown (7.5YR 5/6) color. In one vessel example, the feet are 6.5 cm in height and 7.5 in diameter. They have two vertical slits of 1 cm width, that are 1.5 cm in height and were made at 1 cm from the base. Both slits are separated by 7.2 cm. The base of the feet is flat and measures 2 cm in diameter. The weight of the vessel is 1, 311 gr. The diameter is 40.5 cm. The total height of the vessel is 13.5 cm and the thickness of the walls ranges from .5 to .9 cm (Figure 4.65).

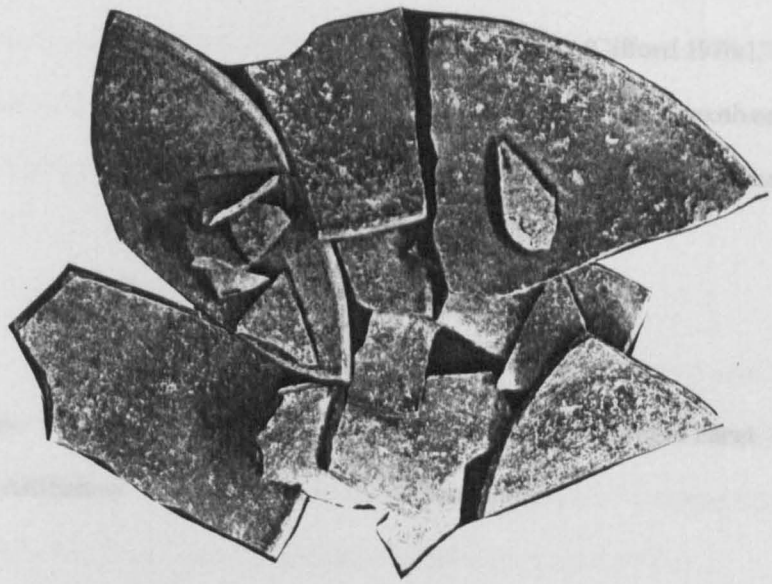


Figure 4.65 The Aguacate Orange: Aguacate Variety Vessel found in Operation VIII.

Inter and Intra-site distribution:

Intra-site distribution:

Aguacate Orange: Aguacate Variety is restricted to Operation VII, 102 and Operation X. It appeared in the construction fills of these operations. In Operation XIII, Aguacate Orange: Aguacate Variety is part of the offering of Burial 6 (Phase V-Operation XIII XII-867 Z31) and Burial 3 (Phase V-Operation XIII XII-845 Z30). In Operation VIII, Aguacate Orange: Aguacate Variety was found in Burial 3 (Phase IIb VIII-35 Z5a), Burial 5 (VIII-72 Z13b) and in a cache (Phase IIb VIII-311 Z3).

Inter-site distribution:

Chalchuapa *Caynac Early Facet 200 B.C. Late Preclassic/Late Facet A.D. 200 Terminal Late Preclassic* (Sharer 1978:110); Komchen *Xculul* (Andrews V 1988:54); Santa Rita *Protoclassic* (A. Chase and D. Chase 1987:53); Tayasal-Paxcaman *Yaxcheel* (A. Chase 1984:31).

Illustration: Figures 4.63-4.65

Type	GUACAMALLO RED-ON-ORANGE
Variety	Guacamallo
Established	Barton Ramie (Gifford 1976:137). Description based at K´axob on 21 sherds, representing 0.07% of the K'atabche'kax Ceramic Complex.
Ceramic Group	Aguacate
Ware	Holmul Orange
Ceramic Complex	K'atabche'kax Terminal Facet
Ceramic Sphere Affiliation	Floral Park

Principal Identifying Attributes:

(1) A reddish yellow (5YR 6/8) glossy slip covers the surfaces of these vessels. (2) The vessels are decorated with red (10R 4/8) bands or broad lines. (3) The paste is of a fine texture. (4) The most common forms are bowls with flared sides.

Paste, Temper and Firing:

The paste is of a fine texture with probable carbonate and quartz particles. The paste color is pale brown (10YR 6/3) and in some sherds a gray (10YR 5/1) core has .6 cm in width.

Surface Finish or Decoration:

The surfaces are well smoothed and covered with a reddish yellow (5YR 6/8) glossy or highly lustrous slip. Red (10R 4/8) bands or broad lines encircle vessels at rim and base on the exterior. The bands measure .9 to 1 cm in width.

Forms:

Bowl Forms. The most common form are bowls with flared sides, direct rim and rounded lip or with everted rim and rounded lip. The estimated diameter measures 24 cm. Thickness of walls varies from .8 to 1 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Guacamallo Orange is restricted to Operation VII and Operation X. It appeared in construction fills of these Structures. Guacamallo Red-on-Orange: Guacamallo Variety was present on a floor (Zone 4) Operation X. Guacamallo Red-on-Orange: Guacamallo Variety was found also in Operation XI, in a construction fill (Zone 4).

Inter-site distribution:

Edzna *Poderes Ceramic Complex-Cepos Subcomplex* (Forsyth 1983); Kakalche and Watson's Island *Protoclassic* (Graham 1994:203); Komchen *Xculul* (Andrews V 1988:54); La Lagunita *Lililla and Tucunel* (Ichon and Arnauld 1985:156; Ichon, René, Arnauld, 1988:88); Santa Rita *Protoclassic* (A. Chase and D. Chase 1987:53); Tayasal-Paxcaman *Yaxcheel* (A. Chase 1984:31).

Illustration: No illustration provided.

Type	IXCANRIO ORANGE-POLYCHROME
Variety	Ixcanrio
Established	Uaxactun (Smith and Gifford 1966:158). Description at K´axob based on 75 sherds, and two partially complete vessels, representing 0.26% of the K'atabche'kax Ceramic Complex.
Ceramic Group	Aguacate
Ware	Holmul Orange
Ceramic Complex	K'atabche'kax Terminal Facet
Ceramic Sphere Affiliation	Floral Park

Principal Identifying Attributes:

(1) A reddish yellow (5YR 6/8) glossy slip covers the surfaces of these vessels. (2) The vessels are decorated with black and red geometric designs of wavy or curved lines, dots and simple stepped elements. (3) The paste is of a fine texture. (4) The most common forms are bowls with tetrapod large hollow mammiform feet.

Paste, Temper and Firing:

The paste is similar to the finer textured sherds of Aguacate Orange: Aguacate Variety, but the texture is very porous. The paste has a light brown (7.5YR 6/4) color. A gray core (7.5YR 5/0 or 7.5YR 4/0) is partially formed, measuring .6 cm in width. It is highly possible that quartz and carbonate inclusions are present in the paste. Paste color in some sherds is light gray (10YR 7/2) or very pale brown (10YR 7/3).

Surface Finish or Decoration:

Surfaces are well smoothed and slightly lustrous on well-preserved sherds. The predominant color of the glossy slip is reddish yellow (5YR 6/8) and yellowish red (5YR 5/8). Ixcanrio Orange-Polychrome: Ixcanrio Variety is identified by the geometric designs that occur on the exterior of vessels. The decoration is based on a red (10R 4/8) band on the rim that is .7 cm in width. On the reddish yellow slip, different geometric patterns are present, and some are difficult to define, because they are extremely eroded. Most designs have a light reddish brown color (2.5YR 6/4) and they are 3 or 4 parallel lines of 2.5 cm in height and .5 cm in width. The interior of these bowls is decorated with a red band on rim that is 2 cm in width and several circumferential lines in a red color (10R 4/8) or in a very dark brown (10YR 2/2). The flange is sometimes decorated with a red (10R 4/8) band.

Forms:

Bowl Forms. Bowls with flared sides have a rounded base, a horizontal everted rim and a rounded lip; or an exterior thickened rim and a rounded lip. The walls have a varying height from 4 to 5 cm. The thickness of these walls varies from .7 to .9 cm and the diameter measures from 32 to 34 cm. There are also dishes with flared sides and a basal flange, with a direct rim and

rounded lip. An important characteristic of these dishes is their large tetrapod hollow mammiform feet.

Two terapod bowls with flared sides present a direct rim with rounded lip. The interior of one vessel has three circumferential lines running from the rim towards the bottom. The first line is red (10R 4/8) and .5 cm in width. The other two lines occur in a very dark brown (10YR 2/2) color and are .3 cm in width. Near the rim, the exterior of the vessel is decorated with a panel that is encircled by the same three bands. The panel is divided into two zones. The first one is decorated with six lines and then separated by a rectangle in red (2.5YR 5/8). The diameter of the plate is 38 cm and the height of walls is 3.3 cm. The rattle feet are hollow mammiform, with a flat nubbin base. The vessel and the feet were slipped in red (2.5YR 5/8). The feet have three slots. Each slot has a height of 4.5 cm and 1 cm in width. The feet have a diameter of 8 cm. Height of the slot is 8.5 cm. The nubbin has a diameter of 1.5 cm. A second vessel is extremely eroded to determine an Ixcanrio Orange-Polychrome: Ixcanrio Variety decoration, but the form is very similar to the first vessel. The diameter of the vessel is 34 cm, the height of walls is 3 cm and it has hollow mammiform feet with a nubbin flat base. The feet are 10 cm high and do have slots that measure 3 cm in height and 1.5 cm in width. The diameter of the feet is 8.5 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Ixcanrio Orange-Polychrome: Ixcanrio Variety was found in Operation VII and Operation X. In Operation VII, it is part of construction fills, of the contents of Burial 1, in a fire pit (Zone 53), on the floor (Zone 52). In Operation VIII, Ixcanrio Orange-Polychrome: Ixcanrio Variety was present on a floor (Zone 2) and in a pit (Zone 5). Two tetrapod bowls were part of the contents of Burial 3. (Phase IIb VIII-34 Z5). In Operation X, Ixcanrio Orange-Polychrome: Ixcanrio Variety was found in Burial 3 (Zone 5) and as part of the construction fill (Zone 3). In Operation XI, it was on the floor of zone 3.

Inter-site distribution:

Altar de Sacrificios *Salinas* (Adams 1971:36); Barton Ramie *Floral Park* (Gifford 1976:143); Colha *Blossom Bank* (Valdez 1987:152; 1988:46); Edzna *Poderes Ceramic Complex-Cepos Subcomplex* (Forsyth 1983); Kakalche *Protoclassic* (Graham 1994:204); Komchen *Xculul* (Andrews V 1988:54); La Lagunita *Lililla and Tucunel* (Ichon, Arnauld 1985:156; Ichon, René, Arnauld 1988:88); Santa Rita *Protoclassic* (A. Chase and D. Chase 1987:53).

Illustration: No illustration provided.

UNSPECIFIED POLYCHROME

This vessel is in association to a Sierra Red vessel in the Zone 17-Operation I. It is a dish with flared sides and a "z" flange. It has 24 cm in diameter and a rounded base (Phase IX-Operation I I-117 Z17 Cache). The height of the walls from the basal flange is 2.8 cm.

Illustration: No illustration provided.

IV.- DESCRIPTION OF THE TYPES AND VARIETIES OF THE NOHALKAX CERAMIC COMPLEX:

THE EARLY CLASSIC PERIOD

Type	ACTUNCAN ORANGE-POLYCHROME
Variety	Actuncan
Established	Uaxactun (Smith and Gifford 1966:154). Description at K'axob based on four complete vessels.
Ceramic Group	Actuncan
Ware	Peten Gloss
Ceramic Complex	Nohalkax
Ceramic Sphere Affiliation	Tzakol

Principal Identifying Attributes:

(1) A reddish yellow (5YR 6/8) slip covers the surfaces of these vessels. (2) The paste is fine. (3) The vessels are decorated with red (10R 4/8) and black (7.5R 2.5/0) designs. (4) The most common forms are a dish with flared sides bowls and a ring base or a bowl with slightly incurved sides

Paste, Temper and Firing:

The paste has a fine texture with and is probably ash-tempered, as suggested by the compactness and " clinking" sound of the sherds.

Surface Finish or Decoration:

Surfaces are well smoothed with a glossy finish. Decoration consists of red (10R4/8) circumferential bands of 1 cm in width, outlined by a very dark brown (10YR 2/2) line of .2 cm in width. The exterior of the vessel is decorated with a circumferential red (10R 4/8) band of .8 to .9 cm in width. A very dark brown (10YR 2/2) encircles a panel decoration in which red (10R4/8) rectangles of 9 cm in length alternate with black (7.5R 2.5/0) rectangles of 7 cm in length.

Forms:

Dish Forms. Dishes with flared sides and a basal flange have a direct rim with a rounded lip. Ring bases are also present. One vessel example has a basal flange that is decorated with portal motifs, including the Kan Cross and the water shell symbols. These motifs were painted in red (10R4/8) and outlined in black (7.5R2.5/0). The basal flange has a width of 3.5 cm. The diameter of the vessel is 32 cm and the height is 11.5 cm. Total weight of the vessel is 2, 065 gr. (See Figure 4.66)

Bowl Forms. Bowls with outcurved sides present a basal flange. These vessels have a direct rim, rounded lip, and ring base. The base is slightly rounded. A bowl with outcurved sides has a height of 11 cm and 33.5 cm in diameter. The ring base is 4 cm in height and 7.2 cm in diameter. The flange has a width of 2.7 cm. Decoration of the vessel is based on red and black designs on an orange base. Inside, the vessel was decorated with a red and black circumferential line.

Figure 4.66 The Vessel with the Water Shell Motifs found in Operation XI.

The red line measures 1.4 cm in width and the black one .3 cm. There is evidence of smoothing on the base. The total weight of the vessel is 1, 512 gr.

A bowl with rounded sides and a ring base has a direct and rounded lip. The vessel is slipped in a light red (2.5YR 6/8) color, acting as a base. The interior of the bowl is slipped in a light red (2.5YR 6/8) color. The exterior ecoration of the vessel consists on a 1.5 cm in width circumferential band near the rim, that was painted in a weak red color (10R 5/4). Scroll angular designs, in the same color, decorate the vessel. It also presents a slipped circumferential light red (2.5YR 6/8) band, having .8 cm in width. The diameter of the vessel is 18 cm and its total height is 9.2 cm. The base has a 12 cm diameter. The total weight is 503 gr. (Figure 4.67)

Inter and Intra-site distribution:

Intra-site distribution:

Description based on four partially restorable vessels. Actuncan Orange-Polychrome: Actuncan Variety was found in Operation XI (Phase XI XI-37 Z19). In Operation XII, the variety

Figure 4.67 Bowl found in Burial 4-Structure 92.

was part of the offering of Burial 4 (Phase 1-Operation XII Zone 32). In Operation VII, another bowl was found in Zone 63 (VIIA-81 Z63).

Inter-site distribution:

Altar de Sacrificios *Ayn-Late Ayn-Veremos* (Adams 1971:37); Barton Ramie *Hermitage* (Gifford 1976:170); Colha *Cobweb* (Valdez 1988:47); Kakalche and Watson's Island *Protoclassic-Tzakol 1* (Graham 1994:204); Piedras Negras *Naba* (Holley 1986:62); Seibal *Junco* (Sabloff 1975:105); Yaxchilan *Yaxcab* (López Varela 1989:85).

Illustration: Figures 4.66 and 4.67

OTHER ACTUNCAN ORANGE-POLYCHROME

A tetrapod bowl, with slightly incurved sides, has hollow conical feet (VIIA-79 Z63). It presents a direct rim and rounded lip. The feet are decorated and modeled as to form peccary heads. The interior of the rim has a red (10R4/8) circumferential band of 1 cm width, outlined by a very dark brown (10YR 2/2) line of 0.2 cm in width. The reddish yellow (5YR 6/8) surface is highly glossy. The exterior of the vessel is decorated with a circumferential red (10R4/8) band of .8 to .9 cm in width. A very dark brown (10YR 2/2) encircles a panel decoration in which red (10R 4/8) rectangles of 9 cm long and black (7.5R2.5/0) rectangles of 7 cm long alternate with

each other. A very dark brown (10YR 2/2) encircles the panel near the incurved base, together with a red (10R4/8) circumferential line of 0.6 cm in width. The feet are 7.3 cm in height and were painted as peccary heads. The orange eyes of the peccary were outlined in the same red with a very dark brown line separating both eyes. The tip of the feet was modeled as to form the mouth and was probably painted in red. The paste is fine textured with probable ash-temper as the compactness and the clinking sound of the sherds suggest. The total height of the vessel is 13.9 cm with a diameter of 17.5 cm and a weight of 773 gr. (See Figure 4.68)

Figure 4.68 The Vessel in the Image of a Peccary.

Type	AGUILA ORANGE
Variety	Aguila
Established	Uaxactun (Smith and Gifford 1966:154). Description at K'axob based on one complete vessel and 1040 sherds, representing 96.12% of the total Nohalkax Ceramic Complex.
Ceramic Group	Aguila
Ware	Peten Gloss
Ceramic Complex	Nohalkax
Ceramic Sphere Affiliation	Tzakol

Principal Identifying Attributes:

(1) A glossy red slip (2.5YR 5/8: 2.5YR 4/8) covers the surfaces of these vessels. (2) The paste has a fine texture. (3) The abundant forms are a flared sides dishes, incurved sides bowls and jars with vertical neck.

Paste, Temper and Firing:

The paste has a fine texture with probable iron and carbonate particles. The paste is oxidized so a core is formed and has a dark gray color (7.5YR 4/0) and .4 cm in width. The paste has a light gray color (2.5YR 7/2).

Surface Finish or Decoration:

The surfaces are well smoothed and covered with a glossy red slip (2.5YR 5/8: 2.5YR 4/8), that is as bright and glossy as the Actuncan Orange-Polychrome type. Differential firing occurs on the surfaces and the red slip grades into a reddish yellow (7.5YR 7/8), yellow (10YR 7/6) or brownish yellow (10YR 6/6). Even though the slip color is very solid, it gives the impression of being an applied wash.

Forms:

Dish Forms. Dishes with flared sides with a direct rim and a rounded lip have an estimated diameter ranging from 17 to 19 cm; although in one rim example, it measures 26 cm. Ranging height of vessels varies from 5.5 to 7 cm, and in some examples is almost 13 cm. Dishes with flared sides and exterior folded rim are 21 cm in diameter. Most of the vessels have a thickness that ranges from .8 to 1 cm. The bases are flat and measure 14 cm in diameter and sometimes are slightly incurved. There is evidence of one pedestal base, but most dishes had solid conical feet with a rounded or flat base. The height of these feet is 2 cm.

Bowl Forms. Bowls present incurved sides with outflared-everted rim and a rounded lip, measuring 18 cm in diameter.

Jar Forms. An Aguila Orange jar with vertical neck has a direct rim and rounded lip. The height of the jar is 13 cm and has a diameter of 9 cm. The neck height is 3.5 cm. The jar has a

ring base, measuring 8 cm in diameter and a height of 1.5 cm. The color of the slip is red (2.5YR 4/8; 2.5YR 5/8) and it was applied on the whole exterior and the interior of the neck. The medium textured paste has a very pale brown (10YR 7/3) or grayish brown (10YR 5/2) color with a core of .4 cm. Total weight of the vessel is 503 gr (Figure 4.69).

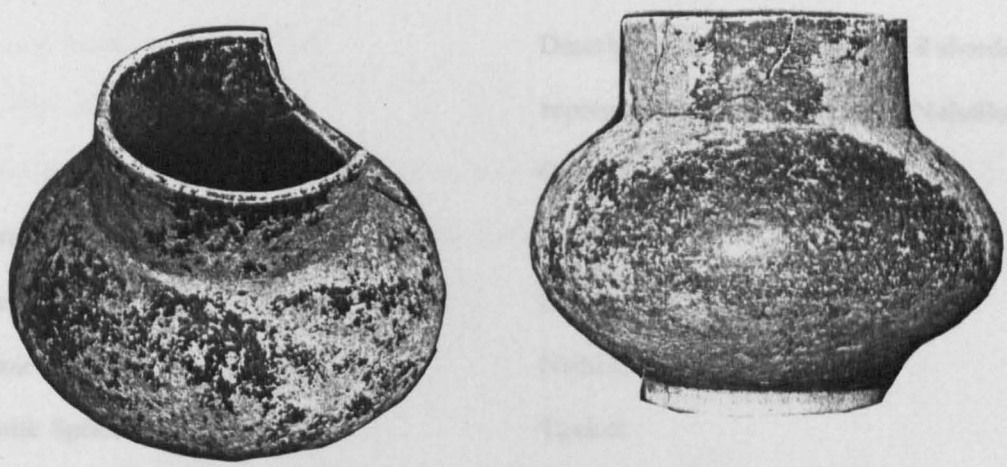


Figure 4.69 The Jar found in Operation XI.

Inter and Intra-site distribution:

Intra-site distribution:

Aguila Orange is present in most contexts of all structures, during the Nohalkax Ceramic Complex. A jar was found in Zone 19-Operation XI (XI-37 Z19).

Inter-site distribution:

Altar de Sacrificios *Salinas-Ayn* (Adams 1971:26); Barton Ramie *Hermitage* (Gifford 1976:182); Becan *Pakluum Terminal facet; Chacsik Early facet; Chacsik Late facet* (Ball 1983:87; 1977a:41); Colha *Cobweb* (Valdez 1988:47); Chan Chen, Santa Rita, Aventura *Early Classic* (Ball 1983:205, 207, 211, 214); Edzna *Poderes Ceramic Complex-Cepos Subcomplex-Full Poderes Subcomplex* (Forsyth 1983); El Mirador *Acropolis -Tzakol* (Forsyth 1986:61); Mayapan

Tzakol (Smith 1971:141); Piedras Negras *Naba-Balche* (Holley 1986:62); Tayasal-Paxcaman *Yaxcheel-Hoxchunchan* (Chase, A. 1984:30); Tikal *Manik* 3 (Laporte, Hermes, de Zea, Iglesias 1992:70; Tikal *Cimi-Manik* Culbert 1993:9-10); Yaxchilan *Yaxcab* (López Varela 1989:87).

Illustration: Figure 4.69

Type	PITA INCISED
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:161). Description at K'axob based on 8 sherds, representing .74% of the total Nohalkax Ceramic Complex.
Ceramic Group	Aguila
Ware	Peten Gloss
Ceramic Complex	Nohalkax
Ceramic Sphere Affiliation	Tzakol

Principal Identifying Attributes:

(1) A glossy red slip (2.5YR 5/8: 2.5YR 4/8) covers the surfaces of these vessels. (2) The paste has a fine texture. (3) Incised geometric patterns that decorate the surfaces. (4) Dishes with flared sides are ver abundant.

Paste, Temper and Firing:

The paste has a fine texture with iron and carbonate particles and a light gray color (2.5YR 7/2). The paste is oxidized and a core is formed in a dark gray color (7.5YR 4/0) .4 cm in width.

Surface Finish or Decoration:

Surfaces are well smoothed and covered with a glossy red slip (2.5YR 5/8: 2.5YR 4/8). Differential firing occurs on the surface and the red slip grades into a reddish yellow (7.5YR 7/8), yellow (10YR 7/6) or brownish yellow (10YR 6/6). The surfaces present incised geometric

patterns, as well as concentric half circle incisions that are similar to one identified sherd in the Barton Ramie collection (see Gifford 1976:Figure 102e).

Forms:

Dish Forms. The only identified form is represented by a dish with flared sides, a direct rim and rounded lip. The diameter of the dish is 31 cm and the thickness of the walls varies from .7 to 1 cm.

Inter and Intra-site distribution:

Intra-site distribution:

Pita Incised: Unspecified Variety is present in Operation VII. It was found on a floor (Zone 24), and in the construction fills of this structure. In Structure 28, Pita Incised: Unspecified Variety was part of the humic layers.

Inter-site distribution:

Barton Ramie *Hermitage* (Gifford 1976:182); Becan (Ball 1977a:85); El Mirador *Acropolis* (Forsyth 1986:66); Mayapan *Tzakol* (Smith 1971:141); Tikal *Manik* 3 (Laporte and Iglesias 1992:70); Tikal Cimi-Manik (Culbert 1993:9-10);Yaxchilan *Yaxcab* (López Varela 1989:98).

Illustration: No figure provided.

Type	BALANZA BLACK
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:154). Description at K'axob based on one complete vessel and 14 sherds, representing 1.29% of the total Nohalkax Ceramic Complex.
Ceramic Group	Balanza
Ware	Peten Gloss
Ceramic Complex	Nohalkax
Ceramic Sphere Affiliation	Tzakol

Principal Identifying Attributes:

(1) A glossy black (7.5YR 2/0) slip covers the surfaces of these vessels. (2) The paste has a fine texture. (3) Flared bowls are very common.

Paste, Temper and Firing:

Paste is fine, but porous, with probable calcite and iron particles. Carbonate particles show through the surface. The color of the paste is yellowish red (5YR 5/6) or olive brown (2.5YR 4/3). No core was recognizable.

Surface Finish or Decoration:

Balanza Black: Unspecified Variety is identified by a glossy black (7.5YR 2/0) slip, that was applied to both interior and exterior surfaces. The slip sometimes degrades into a dark reddish gray (5YR 4/2).

Forms:

Bowl Forms. Bowl have flared sides, direct rim, and rounded lip. Diameter of these vessels is 12 cm. Thickness of the vessels is .7 cm. A flared side bowl has a basal flange, measuring 1 cm in width. The rim is direct with a rounded lip. Height of the vessel is 6 cm and the diameter is 26 cm. The slip is very eroded but presents a dark gray (10YR 3/1) color. The base is slightly rounded. Thickness of the sides varies from .5 to .7 cm (Figure 4.70).

Inter and Intra-site distribution:

Intra-site distribution:

The fragments were found only in Operation VII, in its fill contents, in Burial 1 and on a floor of (Zone 21). In Structure 28, a Balanza Black: Unspecified Variety bowl was found in Burial 2 (Structure 28 XIII-22 Z7).

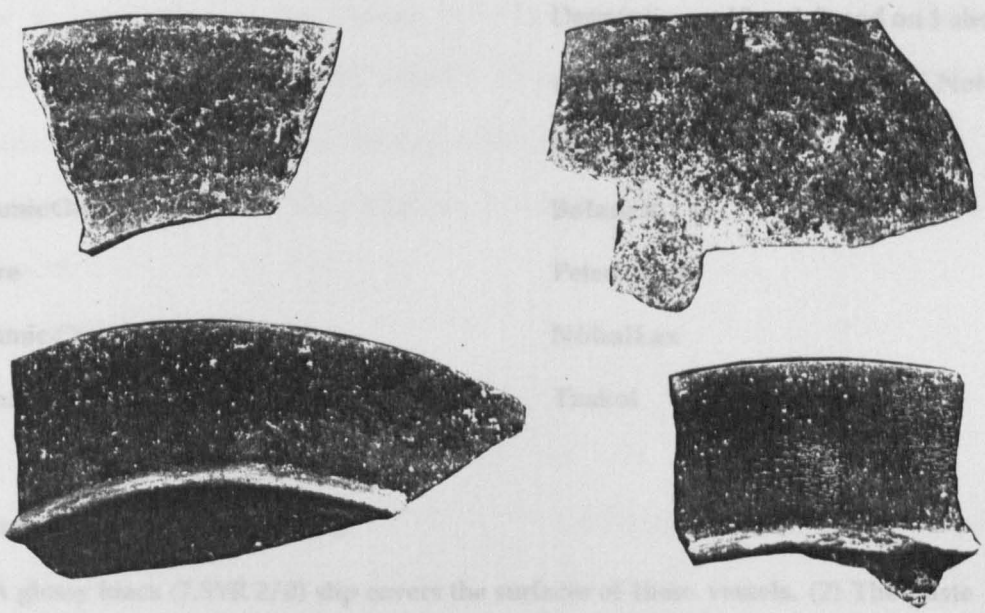


Figure 4.70 Some Sherd Examples of Balanza Black: Unspecified Variety.

Inter-site distribution:

Altar de Sacrificios *Late Ayn-Veremos* (Adams 1971:24); Aventura, Caledonia *Early Classic* (Ball 1983:211, 214); Barton Ramie *Hermitage* (Gifford 1976:161); Becan *Chacsik Early facet-Chacsik Late facet-Sabucan* (Ball 1977a:33); Colha (Variety Balanza) *Cobweb* (Valdez 1987:173; 1988:47); Edzna *Poderes Ceramic Complex (Full Poderes Complex)* (Forsyth 1983); El Mirador *Acropolis* (Forsyth 1986:28; 1989:71); Komchen *Xculul* (Andrews V. 1988:54); Mayapan *Tzakol* (Smith 1971:140); Moho Cay (Ball 1984:74); Piedras Negras *Naba* (Holley 1986:62); Seibal *Junco* (Sabloff 1975:107); Tayasal-Paxcaman *Hoxchunchan* (Chase 1984:31); Tikal *Manik 3* (Laporte and Iglesias 1992:70; Culbert 1993:10);Yaxchilan *Yaxcab* (López Varela 1989:90).

Illustration: Figure 4.70

Type	LUCHA INCISED
Variety	Unspecified

Established	Uaxactun (Smith and Gifford 1966:159). Description at K'axob based on 1 sherd, representing 0.09% of the total Nohalkax Ceramic Complex.
Ceramic Group	Balanza
Ware	Peten Gloss
Ceramic Complex	Nohalkax
Ceramic Sphere Affiliation	Tzakol

Principal Identifying Attributes:

(1) A glossy black (7.5YR 2/0) slip covers the surfaces of these vessels. (2) The paste has a fine texture. (3) The abundant form is a flared bowl with a "Z" angle

Paste, Temper and Firing:

The color of the paste is yellowish red (5YR 5/6). It has a fine texture, but porous, with probable calcite and iron particles. Carbonate particles show through the surface.

Surface Finish or Decoration:

The glossy black (7.5YR 2/0) slip was applied on both sides. It is decorated by fine incised lines below the rim, occurring only in the exterior.

Forms:

Bowl Form. It is a bowl with flared sides with a probable Z angle. Thickness of the walls is .7 cm. No rims were found to determine the diameter of the vessel.

Inter and Intra-site distribution:

Intra-site distribution:

Lucha Incised: Unspecified Variety was found in Operation VII, in the fill contents of zone 2.

Inter-site distribution:

Altar de Sacrificios *Late Ayn* (Adams 1971:43); Barton Ramie *Hermitage* (Gifford 1976:164); Colha *Cobweb* (Valdez 1987:175; 1988:47); El Mirador *Acropolis* (Forsyth 1986:28; 1989:73); Piedras Negras *Naba-Balche* (Holley 1986:62); Seibal *Junco* (Sabloff 1975:110); Tayasal-Paxcaman *Hoxchunchan* (Chase 1984:31); Tikal *Manik* 3 (Laporte, Iglesias 1992:70; Culbert 1993:9-10).

Illustration: No figure provided.

Type	SAN MARTIN VARIEGATED BROWN
Variety	San Martin
Established	Seibal (Sabloff 1975:102). Description at K'axob based on one complete vessel and 4 sherds, representing 0.37% of the total Nohalkax Ceramic Complex.
Ceramic Group	San Martin
Ware	Playa Dull
Ceramic Complex	Nohalkax
Ceramic Sphere Affiliation	Tzakol

Principal Identifying Attributes:

(1) A glossy brownish yellow (10YR 7/4) slip covers the surfaces of these vessels. (2) The paste has a fine texture. (3) The abundant form is a bowl with incurved recurved sides.

Paste, Temper and Firing:

The color of the paste is yellowish red (5YR 5/6). It has a fine texture, with probable calcite and iron particles.

Surface Finish or Decoration:

The surfaces are well polished in a brownish yellow (10YR 7/4), very pale brown (7.5YR 6/8) or reddish yellow (7.5YR 6/8) color. Differential firing occurs on the surfaces in a dark brown (7.5YR 3/2) or strong brown color (7.5YR 5/6). Base were also slipped.

Forms:

Bowl Forms. Bowls with incurved recurved sides present a collared neck, and a flat base. One example has 15 cm in diameter. Height of the vessel is 13 cm. The collared neck has a height of 7.8 cm. The diameter of the base is 7.8 cm and the total weight of the vessel is 1, 003 gr (Figure 4.71).

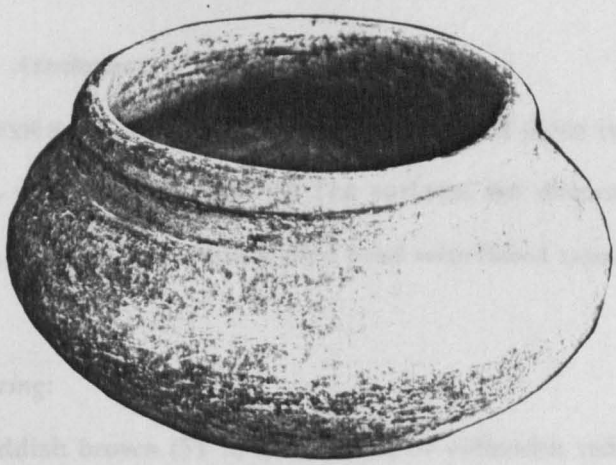


Figure 4.71 A Collared-neck Vessel found in Operation VII.

Inter and Intra-site distribution:

Intra-site distribution:

San Martin Variegated Brown: San Martin Variety was found in Operation VII (Phase 1-VIIA-85 Z69).

Inter-site distribution:

Seibal: *Junco* (Sabloff 1975:102).

Illustration: Figure 4.71

Type	SANTA TERESA INCISED
Variety	Santa Teresa
Established	Barton Ramie (Gifford 1976:169). Description at K'axob based on 15 sherds, representing 1.39% of the total Nohalkax Ceramic Complex.
Ceramic Group	Pucte
Ware	Peten Gloss
Ceramic Complex	Nohalkax
Ceramic Sphere Affiliation	Tzakol

Principal Identifying Attributes:

(1) A yellowish red (5YR 5/8) glossy slip covers the surfaces of these vessels, giving a mottled effect. (2) The paste has a fine texture. (3) The surfaces are decorated with grooves and incisions. (4) The abundant form is a thin-walled bowl with flared sides.

Paste, Temper and Firing:

The paste color is reddish brown (5Y 5/3; 5YR 5/4) or yellowish red (5YR 5/6). It is a fine textured paste with carbonate and iron particles. The white particles sometimes are shown on the surface.

Surface Finish or Decoration:

The exterior and interior surfaces of the sherds are mottled, making the color of the surface range into a yellowish red (5YR 5/8); reddish brown (5YR 4/3) or red (2.5YR 4/8). Fire clouding occurson surfaces, with a black color (5YR 2.5/1). Decoration for this type is based on grooves and incisions that form scrolls and dots, encircled in a band (Figure 4.72).

Forms:

Bowl Forms. Bowls with flared sides present a direct rim with a rounded lip. Average diameter measures 18 cm. Thickness of the vessels varies from .7 to .8 cm. Average height of the vessels measures 6.7 cm.

Figure 4.72 Some Sherds of Santa Teresa Incised: Santa Teresa Variety.

Inter and Intra-site distribution:

Intra-site distribution:

Santa Teresa Incised: Santa Teresa Variety was found in a pit (Zone 5) of Operation VIII.

Inter-site distribution:

Barton Ramie: *Hermitage* (Gifford 1976:169); Caledonia *Early Classic* (Ball 1983:214); Colha *Cobweb* (Valdez 1988:47); Tikal *Manik 3* (Laporte and Iglesias 1992:70).

Illustration: Figure 4.72

Type	YALOCHE CREAM POLYCHROME
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:164)
	Description at K'axob based on one complete vessel.
Ceramic Group	Dos Arroyos
Ware	Peten Gloss
Ceramic Complex	Nohalkax
Ceramic Sphere Affiliation	Tzakol

Principal Identifying Attributes:

(1) A thick cream (light gray 10YR 7/2) slip covers the surfaces of the vessels. (2) The paste has a fine texture. (3) Surfaces are decorated with black or red motifs. (4) The identified form is a bowl with incurved sides.

Paste, Temper and Firing:

The paste color is reddish brown (5YR 5/3; 5YR 5/4). It has a fine texture.

Surface Finish or Decoration:

The slip is extremely eroded and it seems that the cream color served as a base to another color. The color identified is a light gray (10YR 7/2), light brown (10YR 6/3) and gray (10YR 6/1).

Forms:

Bowl Forms. The bowl has incurved sides, direct rim with rounded lip, and a flat base. The height of the bowl is 6.8 cm. The diameter is 16.2 cm. The thickness of the walls is 0.5 cm and its weight is 435.6 cm (Figure 4.73).

Inter and Intra-site distribution:

Intra-site distribution:

A bowl was found in Operation XI (XI-37 Z19).

Figure 4.73 The Yaloche Cream: Unspecified bowl found in Operation XI.

Inter-site distribution:

Barton Ramie: *Hermitage* (Gifford 1976:181); Tikal: *Manik*(Culbert 1993:9): Uaxactun: *Tzakol* (Smith and Gifford 1966:164).

Illustration See Figure 4.73

Type	DOS ARROYOS ORANGE-POLYCHROME
Variety	Unspecified
Established	Uaxactun (Smith and Gifford 1966:157) Description at K'axob based on one complete vessel.
Ceramic Group	Dos Arroyos
Ware	Peten Gloss
Ceramic Complex	Nohalkax
Ceramic Sphere Affiliation	Tzakol

Principal Identifying Attributes:

(1) Red, black geometric designs on a yellowish red (5YR 7/8) base (2) The paste has a fine texture. (3) Basal flange bowls are very common of this type.

Paste, Temper and Firing:

The paste has a fine texture and finely crushed calcite shows on the surface. The color of the paste is yellowish red (5YR 5/6).

Surface Finish or Decoration:

Surfaces are well smoothed and covered with a yellowish red (5YR 7/8) slip color, acting as a base. Bases are unslipped and present smoothing marks. Exterior decoration consists of red (2.5YR 5/8) or yellowish red (5YR 7/8) bands, appearing near the rim. Below these bands, there are also red (10R 4/3) bands measuring 1.5 cm in width. Vertical lines run from these horizontal bands towards the basal flange, in a weak red (10R 4/3) color (Figure 4.74). On the flange, red (7.5R 4/8) dots were painted and encircled by "U" shaped red (10R 4/3) motifs . On the interior, there is a red (7.5R 4/8) band near the rim measuring 1.5 cm in width. A second band in a weak red (10R 4/3) color with a .5 cm in width runs after the first one.

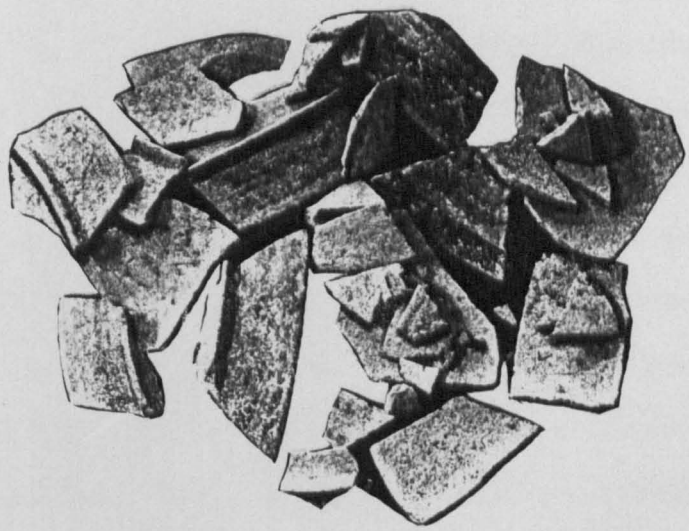


Figure 4.74 A Dos Arroyos Orange-Polychrome: Unspecified Variety vessel.

Forms:

Bowl Form. Bowls with flared sides present a direct rim with rounded lip. Bowls with a basal flange have a rounded base. Average height of these bowls, from the flange, is 7 cm. Total height is 11 cm. Average diameter is 20 cm. The thickness of the walls is .5 cm.

Inter and Intra-site distribution:

Intra-site distribution:

The bowl was found in Burial 2-Structure 28 (Structure 28 XIII-24 Z7 Burial 2).

Inter-site distribution:

Barton Ramie: *Hermitage* (Gifford 1976:181); Kakalche and Watson's Island *Protoclassic-Tzakol 1* (Graham 1994:204) Uaxactun: *Tzakol* (Smith and Gifford 1966:164); Tikal: *Manik*(Culbert 1993:9)

Illustration: See Figure 4.74

Chapter V: The Ceramic Complexes

CERAMIC CHARACTERISTICS OF THE K'AXOB CERAMIC COMPLEXES

In this chapter, I describe the contents, intra-site patterning, and inter-site comparisons of the K'axob Ceramic Complexes with other sites in the Maya area. The ceramic discussion will establish the alignment of the K'axob Ceramic Complexes with other Maya and Mesoamerican ceramic sequences. Here, I present the data sequentially, to further support the establishment of the K'axob ceramic complexes.

I.- DIAGNOSTIC CERAMIC CHARACTERISTICS OF THE CHAAKKAX CERAMIC COMPLEX

A.- *General Characteristics of the Chaakkax Ceramic Complex*

Operation I provides ceramic evidence to establish the Middle Formative sequence. A total of 11, 114 sherds was analyzed for the Chaakkax Ceramic Complex. The ceramics were classified into 17 types, listed in Table 5.1. Evidence indicates that Chicago Orange: Chucun Variety is statistically dominant during this complex (70.19%), followed by Joventud Red: Unspecified Variety (18.78%), while Muxanal Red-on-Cream: Unspecified Variety (1.75%) and Guitara Incised: Guitara Variety (4.07%) occur in a minor proportion (Table 5.1). Chicago Orange: Chucun Variety is a dominant type in Operation XII and Joventud Red: Unspecified Variety in the early deposits of Operation I. The presence of Abelino Red: Abelino Variety (0.21%) and Toribio Red-on Cream: Toribio Variety (0.31%) indicates the continuation of early Xe components. These types, however, disappeared for the Late Facet of the Chaakkax Ceramic Complex. Types, such as Tierra Mojada Resist: Tierra Mojada Variety, Timax Incised, and Pital Cream: Pital Variety are evidence of ceramic distribution between the Peten and the Belize

Valley. The presence of three sherds of Unnamed Resist Orange ceramic material gives evidence of wide spread distribution of the resist technique from the Guatemala Highlands and El Salvador into northern Belize.

Table 5.1. Types and varieties of the Chaakkax Ceramic Complex by Operation

Types and Varieties	Total Number of Sherds	Percentage of Total Number of sherds	Percentage of Total in Operation I (Structure 18)	Percentage of Total in Operation XII (Structure 28)
Abelino Red: Abelino Variety	23	0.21%	0.18%	1.42%
Toribio Red-on Cream: Toribio Variety	35	0.31%	0.32%	0.00%
Chunhinta Black: Unspecified Variety	25	0.22%	0.23%	0.00%
Desvario Chamfered: Unspecified Variety	1	1.01%	0.0)%	0.35%
Tierra Mojada Resist: Tierra Mojada Variety	112	1.01%	1.03%	0.00%
Timax Incised: Timax Variety	12	0.11%	0.11%	0.00%
Pital Cream: Pital Variety	137	1.23%	1.26%	0.00%
Pital Cream: Red Slipped Variety	61	0.55%	0.56%	0.00%
Unnamed Resist Orange	3	0.03%	0.03%	0.00%
Chicago Orange: Chucun Variety	7801	70.19%	67.73%	87.94%
Joventud Red: Unspecified Variety	2087	18.78%	19.26%	0.35%
Joventud Red: Jolote Variety	170	1.53%	1.32%	9.57%
Guitara Incised: Guitara Variety	452	4.07%	4.16%	0.35%
Muxanal Red-on-Cream: Unspecified Variety	195	1.75%	1.80%	0.00%
TOTALS	11,114	100%	100%	100%

B.- *Wares of the Chaakkax Ceramic Complex*

Various decoration methods were used for the vessels of the Chaakkax Ceramic Complex. The preferred technique was the use of a highly polished monochrome slipping, giving a waxy texture to the vessels and therefore constituting the most important diagnostic of the Mamom sphere (Table 5.2). Red slips were used for most dishes, bowls, tecomates and jars of the Chaakkax Ceramic Complex and are included in the dominant Flores Waxy Ware (24.38%) or the Rio Pasion Slipped Ware (0.21%). In the Late Phase of this complex, Paso Caballo Waxy Ware was introduced with the appearance of Sierra Red: Sierra Variety and Matamore Dichrome: Matamore Variety.

Table 5.2. Wares of the Chaakkax Ceramic Complex

WARES	Types	Number of Sherds	Percentage in the Chaakkax Ceramic Complex
The Red Ware			
Rio Pasion Slipped	Abelino Red: Abelino Variety	23	0.21%
Flores Waxy	Joventud Red: Unspecified Variety	2087	18.78%
	Joventud Red: Jolote Variety	170	1.53%
	Guitara Incised: Guitara Variety	452	4.07%
	TOTAL	**2732**	**24.59%**
The Red-on-Cream Ware			
Rio Pasion Slipped	Toribio Red-on Cream: Toribio Variety	35	0.31%
Flores Waxy	Pital Cream: Red-slipped Variety	61	0.55%
	Muxanal Red-on-Cream: Unspecified Variety	195	1.75%
	TOTAL	**291**	**2.61%**
Resist Ware			
Flores Waxy	Tierra Mojada Resist: Tierra Mojada Variety	112	1.01%
	Timax Incised: Timax Variety	12	0.11%
	Unnamed Resist Orange	3	0.02%
	TOTAL	**127**	**1.14%**
Orange Ware			
Fort George Orange	Chicago Orange: Chucun Variety	7801	70.21%
	TOTAL	**7804**	**70.21%**
Black Ware			
Flores Waxy	Chunhinta Black: Unspecified Variety	25	0.22%
Cream Ware			
Flores Waxy	Pital Cream: Pital Variety	137	1.23%
	TOTAL	**11,114**	**100%**

A total of 2732 sherds was red slipped, representing 24.59% of the entire complex. Included in the Flores Waxy ware are the Joventud Red: Unspecified Variety, Joventud Red: Jolote Variety and the Guitara Incised: Guitara Variety. A red (2.5YR 4/6), reddish brown (2.5YR 4/3), or dark reddish brown (2.5YR 3/3) slip color covered the vessels belonging to the Joventud Red: Unspecified Variety and Jolote Variety. A red (10R 4/0; 10R 5/8) or a very dusky red (10R 2.5/2) color was preferred for the Guitara Incised: Guitara Variety. The Rio Pasion slipped ware had only one type that presented a dark red (10R 4/6) overall slip.

Dichrome decoration occurs on 291 sherds, representing 2.61% of the total number of sherds found in this complex. Dichrome decoration appears in the following types: Toribio Red-on Cream: Toribio Variety, Muxanal Red-on-Cream: Unspecified Variety, and Matamore Dichrome: Matamore Variety. It is possible that the Chicanel Matamore Dichrome: Matamore Variety vessel has its origins in the Mamom tradition, which explains its early occurrence during the Late Facet of the Chaakkax Ceramic Complex. The Muxanal Red-on-Cream: Unspecified Variety is covered with a white slip (10YR 8/2) that serves as a primary base for the geometric or wavy motifs painted in a dark red (7.5R 3/8) color.

Chicago Orange: Chucun Variety sherds dominate in quantity (7,804 representing 70.22%), during the entire complex. The Mamom Chicago Orange: Chucun Variety has a self slip that resembles the clay used for the making of these vessels. A reddish yellow (5YR 7/6) slip was applied to the large bowls, jars, and tecomates. A thin slipping in a yellow orange was applied to the Unnamed Orange resist type, which is restricted to this period. Black monochrome wares occur in a minor proportion (0.22%).

Resist decoration appeared during the Early Facet of the Chaakkax Ceramic Complex. Incising is a diagnostic decorative mode to alter the surface during this period, specially in the Guitara Incised: Guitara Variety and Muxanal Red-on-Cream: Unspecified Variety. Incision takes the form of one to three, generally preslip, circumferential lines.

Preslip incised circumferential lines occur on the exterior of vessels, near the rim, on the horizontal everted rim, and near the base. Incising is very common on dishes, flared bowls and tecomates. Chamfering or the clapboard effect is another important technique used during this period, to decorate the tecomate form. Chamfering usually begins near the rim or it can continue down to the base.

C.- *Forms of the Chaakkax Ceramic Complex*

The quantification of forms, present in every complex, is based on a count of rim sherds. The forms of which the identification is based on rim sherds, are classified in broad categories, such as bowls, dishes, jars. The predominant forms during the Chaakkax Ceramic Complex are bowls (88.09%), dishes (7.75%) and tecomates (2.01%), representing a total of 97.85%. Jars with outcurved neck are present in a minor proportion (2.15%). Complete vessels and diagnostic rims support the classification of main forms into dishes or bowls with flared or outcurved sides. Dishes are restricted to Abelino Red: Abelino Variety, Joventud Red: Jolote Variety, Guitara Incised: Guitara Variety, and Pital Cream: Red-slipped Variety. Bowls occur in most types. Jars are only present in the Chicago Orange: Chucun Variety. Generally, jar rims are everted or horizontal everted. The tecomate is associated with an interior thickened rim. Usually, the lip is rounded in most vessels of this period, while beveled-in lips occur on vessels with outcurved sides. In most vessel examples, the base is flat. Only flat base fragments were provided by the excavations (Table 5.3).

Table 5.3. The Chaakkax Ceramic Complex Forms

Operation XII (Structure 28)						
Type	Dishes	Bowls	Tecomate	Jars	Base	Spouts
Abelino Red: Abelino Variety	4					

Operation I (Structure 18)						
Type	Dishes	Bowls	Tecomate	Jars	Base	Spouts
Joventud Red: Unspecified Variety		18	2			
Joventud Red: Jolote Variety	37	101				
Guitara Incised: Guitara Variety	7	34	1		1	5
Pital Cream: Red-slipped Variety	3	57	1		1	
Toribio Red-on-Cream: Toribio Variety		35				
Chunhinta Black: Unspecified Variety		23	1		1	
Pital Cream: Pital Variety	3	128	8		1	
Tierra Mojada Resist: Tierra Mojada Variety		99			8	
Unnamed Resist Orange		3				
Chicago Orange: Chucun Variety		35	1	15		
Muxanal Red-on-Cream: Unspecified Variety		81				
TOTAL	**54**	**614**	**14**	**15**	**11**	**5**

The bowl and the tecomate form predominate in the Chicago Orange: Chucun Variety of the Chaakkax Ceramic Complex (Table 5.4). Included in the bowl forms are large basins or bowls with outcurved sides an everted rim and a beveled in lip. A bowl with incurved-recurved sides, outcurved neck, everted rim and beveled-out lip is also common. The jar form has an outcurved neck with a horizontal everted rim and a rounded lip. The tecomate is associated with an interior thickened rim.

Table 5.4. The Forms of Chicago Orange: Chucun Variety

Forms	Number of Sherd Rims	Percentage
Bowls	35	68.63%
Jars	15	29.41%
Tecomate	1	1.96%
Total Rims	**51**	**100.00%**

Especially diagnostic of Joventud Red: Unspecified Variety are dishes with flared sides, outflared-everted rim and rounded lip; dishes with flared sides, everted rim and rounded lip; bowls with incurved sides and a vertical neck; bowl or tecomates with markedly incurved sides and a restricted orifice, interior thickened rim and rounded lip (Table 5.5).

Table 5.5. The Forms of Joventud Red: Unspecified Variety

Forms	Number of Sherd Rims	Percentage
Bowls	23	95.83%
Tecomates	1	4.17%
TOTAL RIMS	**24**	**100%**

Two main forms, an outcurved dish with outflared everted rim and a bowl with incurved sides and a vertical neck are part of Joventud Red: Jolote Variety (Table 5.6).

Table 5.6. The Forms of Joventud Red: Jolote Variety

Forms	Number of Sherd Rims	Percentage
Bowls	37	26.81%
Tecomates	101	73.19%
TOTAL RIMS	138	100%

The forms of Guitara Incised: Guitara Variety include bowls with outcurved sides, horizontal everted rim and rounded lip or with an everted rim and rounded lip; and bowls with markedly incurved sides and a restricted orifice (Table 5.7).

Table 5.7. The Forms of Guitara Incised: Guitara Variety

Forms	Number of Sherd Rims	Percentage
Dishes	7	16.67%
Bowls	34	80.95%
Tecomate	1	2.38%
TOTALS	**42**	**100.00%**
Base	1	
Spout	1	

Four rim sherds of Abelino Red: Abelino Variety were found within the ceramic assemblage. The type is characterized by dishes with flared or outcurved sides. Toribio Red-on Cream: Toribio Variety is characterized by bowls with flared or outcurved sides. Generally the rim is direct with a rounded lip. Tierra Mojada Resist: Tierra Mojada Variety, Pital Cream: Pital Variety, Pital Cream: Red-slipped Variety are some of the types that present a bowl with flared or outcurved sides. The forms of Muxanal Red-on-Cream: Unspecified Variety are restricted to dishes with flared sides, horizontal everted rim and a rounded lip; dishes with outcurved sides, everted rim and rounded lip or a beveled-out rim and rounded lip. (Tables 5.8 and 5.9).

Table 5.8. The Forms of Pital Cream: Pital Variety

Forms	Number of Sherd Rims	Percentage
Dishes	3	2.16%
Bowls	128	92.09%
Tecomate	8	5.76%
TOTALS	**139**	**100.00%**

Table 5.9. The Forms of Chunhinta Black: Unspecified Variety

Forms	Number of Sherd Rims	Percentage
Bowls	23	95.83%
Tecomate	1	0.04%
Base	1	100.00%

II.- DIAGNOSTIC CERAMIC CHARACTERISTICS OF THE EARLY FACET OF THE CHAAKKAX CERAMIC COMPLEX

A.- General Characteristics of the Early Facet of the Chaakkax Ceramic Complex

The Early Facet produced a sequence of types, including Abelino Red: Abelino Variety and Toribio Red-on Cream: Toribio Variety, that is characteristic of Real-Xe complexes, and Mamom types, such as Joventud Red: Unspecified Variety, Guitara Incised: Guitara Variety or Muxanal Red-on-Cream: Unspecified Variety (Table 5.10). During the Early Facet of the

Chaakkax Ceramic Complex Chicago Orange: Chucun Variety (70.77%) is the most abundant type in quantitative terms, followed by Joventud Red: Unspecified Variety (18.08%). Guitara Incised: Guitara Variety (3.88) and Muxanal Red-on-Cream: Unspecified Variety (1.49%) are also very significant within the assemblage (Table 5.10).

Table 5.10. Types and Varieties of the Early Facet of the Chaakkax Ceramic Complex

Types and Varieties	Total Number of Sherds	Percentage of Total Number of sherds	Percentage of Total in Operation I (Structure 18)	Percentage of Total in in Operation XII (Structure 28)
Abelino Red: Abelino Variety	23	0.23%	0.20%	0.04%
Toribio Red-on-Cream: Toribio Variety	35	0.35%	0.36%	0.00%
Chunhinta Black: Unspecified Variety	25	0.25%	0.26%	0.00%
Desvario Chamfered: Unspecified Variety	1	0.01%	0.0%	0.35%
Tierra Mojada Resist: Tierra Mojada Variety	112	1.12%	1.15%	0.00%
Timax Incised: Timax Variety	12	1.12%	0.12%	0.00%
Pital Cream: Pital Variety	137	1.37%	1.41%	0.00%
Pital Cream: Red Slipped Variety	61	0.61%	0.63%	0.00%
Unnamed Resist Orange	3	0.03%	0.03%	0.00%
Chicago Orange: Chucun Variety	7081	70.77%	70.27%	87.94%
Joventud Red: Unspecified Variety	1809	18.08%	18.59%	0.35%
Joventud Red: Jolote Variety	170	1.70%	1.47%	9.57%
Guitara Incised: Guitara Variety	388	3.88%	3.98%	0.35%
Muxanal Red-on-Cream: Unspecified Variety	149	1.49%	1.53%	0.00%
TOTALS	10,006	100%	100%	100%

B.- *Wares of the Early of the Early Facet of the Chaakkax Ceramic Complex*

The Chaakkax Ceramic Complex is represented primarily by types with a fine paste texture. Quite possibly, fine paste is a ceramic tradition of the Middle Formative, as types and varieties in the Gulf and Pacific Coasts are characterized by this paste texture. Monochrome slipping is the dominant diagnostic of this phase. A total of 2390 sherds, representing 23.85% of the Early Facet, was red slipped. Joventud Red: Unspecified Variety and the Jolote Variety, together with the Guitara Incised: Guitara Variety are included in the Flores Waxy ware. A dark red (10R 4/6) was used for the vessels of Abelino Red: Abelino Variety. A red (2.5YR 4/6), reddish brown (2.5YR 4/3), or dark reddish brown (2.5YR 3/3) slip color covered the vessels of Joventud Red: Unspecified Variety and Joventud Red: Jolote Variety. A red (10R 4/0; 10R 5/8)

ora very dusky red (10R 2.5/2) color was preferred for Guitara Incised: Guitara Variety. The Chicago Orange: Chucun Variety is slipped with a lighter orange (pink 7.5YR 7/4), than the Chicanel slip. Red slips are included in the dominant Flores Waxy Ware and the Rio Pasion Slipped Ware (Table 5.11).

Table 5.11. Wares of the Early Facet of the Chaakkax Ceramic Complex

WARES	Types	Number of Sherds	Percentage in the Early Facet of the Chaakkax Ceramic Complex
The Red Ware			
Rio Pasion Slipped	Abelino Red: Abelino Variety	23	0.23%
Flores Waxy	Joventud Red: Unspecified Variety	1809	18.08%
	Joventud Red: Jolote Variety	170	1.70%
	Guitara Incised: Guitara Variety	388	3.88%
	TOTAL	**2390**	**23.89%**
The Red-on-Cream Ware			
Rio Pasion Slipped	Toribio Red-on Cream: Toribio Variety	35	0.31%
Flores Waxy	Pital Cream: Red-slipped Variety	61	0.61%
	Muxanal Red-on-Cream: Unspecified Variety	149	1.49%
	TOTAL	**245**	**2.41%**
Resist			
Flores Waxy Ware	Tierra Mojada Resist: Tierra Mojada Variety	112	1.12%
	Timax Incised: Timax Variety	12	.11%
	Unnamed Resist Orange	3	0.03%
	TOTAL	**127**	**1.26%**
Orange			
Fort George Orange	Chicago Orange: Chucun Variety	7081	70.77%
	TOTAL	**7081**	**70.77%**
Black			
Flores Waxy Ware	Chunhinta Black: Unspecified Variety	25	0.22%
Cream			
Flores Waxy Ware	Pital Cream: Pital Variety	25	0.25%
	TOTAL	**10,006**	**100%**

Dichrome decoration occurs on 245 sherds that constitute 2.41% of the total. Toribio Red-on Cream: Toribio Variety, Muxanal Red-on-Cream: Unspecified Variety, Pital Cream: Red-slipped Variety are representative types of dichrome decoration. Geometric, parallel dark red (7.5R 3/8) lines, squares, or wavy lines motives painted in a dark red (7.5R 3/8) color are very common in the Muxanal Red-on-Cream: Unspecified Variety. Resist decoration (1.26%) is restricted to the Early Facet of the Chaakkax Ceramic Complex.

Incising is a favored decorative mode to alter the surface, specially in the Guitara Incised: Guitara Variety and Muxanal Red-on-Cream: Unspecified Variety types. The vessels are incised with one to three lines. Pre-slip incised circumferential lines occur near the rim on the exterior part of vessels, or on the horizontal everted rims, or as incised-bottomed lines. Chamfering is an important technique to decorate the tecomate form.

C.- *Forms of the Early Facet of the Chaakkax Ceramic Complex*

The forms of the Early Chaakkax Facet are mainly dishes, bowls and tecomates (Table 5.12). The bowl is a dominant form during the Early Facet as it is present in most types. The tecomate form is not as abundant as the dish form. The tecomate form will diminish in frequency during the Late Facet.

The specified form for Abelino Red: Abelino Variety is a dish with flared or outcurved sides. The Joventud: Jolote Variety also includes a dish with outcurved sides and a bowl with incurved sides, with a vertical neck. The Guitara Incised: Guitara Variety type has a tecomate and a bowl with outcurved sides. Bowls and dishes with outcurved sides represent the forms of Pital Cream: Red-slipped Variety. The Chunhinta Black: Unspecified Variety has a bowl with outcurved sides and a tecomate form. Toribio Red-on Cream: Toribio Variety is characterized by a bowl with flared sides.

Table 5.12. Forms of the Early Facet of the Chaakkax Ceramic Complex

Operation XII (Structure 28)					
Type	Dishes	Bowls	Tecomate	Base	Spouts
Abelino Red: Abelino Variety	4				

Operation I (Structure 18)					
Joventud Red: Jolote Variety	37	101			
Guitara Incised: Guitara Variety	7		1		5
Pital Cream: Red-slipped Variety	3	57	1	1	
Toribio Red-on-Cream: Toribio Variety		35			
Chunhinta Black: Unspecified Variety		23	1	1	
Pital Cream: Pital Variety	3	128	8	1	
Tierra Mojada Resist: Tierra Mojada Variety		99		8	
Unnamed Resist Orange		3			
TOTAL	**51**	**446**	**11**	**11**	**5**

III.- DIAGNOSTIC CERAMIC CHARACTERISTICS OF THE LATE FACET OF THE CHAAKKAX CERAMIC COMPLEX

A.- *General Characteristics of the Late Facet of the Chaakkax Ceramic Complex*

The absence of Xe-Mamom types and the stratigraphic data discussed in Chapter II help to separate the Early Facet from the Late Facet. Types represented in the Late Facet include Chicago Orange: Chucun Variety, Joventud Red: Unspecified Variety, Guitara Incised: Guitara Variety and Muxanal Red-on-Cream: Unspecified Variety continued to the Late Facet (Table 5.13). Chicago Orange: Chucun Variety was still the dominant type (64.59%) followed by Joventud Red: Unspecified Variety (25.09%), Guitara Incised: Guitara Variety (5.78%) and Muxanal Red-on-Cream: Unspecified Variety (1.53%).

Table 5.13. Types and Varieties of the Late Facet of the Chaakkax Ceramic Complex

Types and Varieties	Total Number of Sherds	Percentage of the Total in Operation I (Structure 18)
Chicago Orange: Chucun Variety	720	64.98%
Joventud Red: Unspecified Variety	278	25.09%
Guitara Incised: Guitara Variety	64	5.78%
Muxanal Red-on-Cream: Unspecified Variety	46	1.53%
Total	**1108**	**100%**

A total of 712 sherds, representing 49.72% of the Late Facet were red slipped. Included in the Flores Waxy ware is the Joventud Red type with its Unspecified Variety; the Guitara Incised: Guitara Variety and the Muxanal Red-on-Cream: Unspecified Variety. The very dusky red (10R 2.5/2) color of Joventud Red: Unspecified Variety turned into a red (2.5YR 4/6), reddish brown (2.5YR 4/3), or dark reddish brown (2.5YR 3/3) slip color that is also covering the vessels of Guitara Incised: Guitara Variety.

B.- *Wares of the Late Facet of the Chaakkax Ceramic Complex*

The monochrome slipping of the Late Facet is highly polished when compared with the Early Facet slipping. The waxy ware continues to be an important diagnostic of the Late Facet. Red slips were used for most bowls, tecomates and jars of the Late Chaakkax Facet and are included in the dominant Flores Waxy Ware (49.72%). In the Late Phase of this complex, Paso Caballo Waxy Ware was introduced with the appearance of Sierra Red: Sierra Variety and Matamore Dichrome: Matamore Variety.

The orange ware continued to be a dominant ware (50.27%) in the Late Facet. In comparison with the Early Facet, the orange ware diminished its frequency from 70.77% to 50.27% (Table 5.14). Dichrome decoration also occurs on one complete vessel of the Matamore Dichrome: Matamore Variety and 46 sherds of the Muxanal Red-on-Cream: Unspecified Variety, that constitutes 3.21% of the total facet. The Muxanal Red-on-Cream: Unspecified Variety type presents its Early Facet characteristics.

Table 5.14. Wares of the Late Facet of the Chaakkax Ceramic Complex

WARES	Types	Number of Sherds	Percentage in the Late Facet of the Chaakkax Ceramic
The Red Ware			
Flores Waxy	Joventud Red: Unspecified Variety	278	19.42%
	Guitara Incised: Guitara Variety	388	27.09%
	Muxanal Red-on-Cream: Unspecified Variety	46	3.21%
	TOTAL	**712**	**49.72%**
Orange Ware			
Fort George Orange	Chicago Orange: Chucun Variety	720	50.27%
	TOTAL	1432	100.00%

The vessels of Chicago Orange: Chucun Variety dominate in quantity (50.27%), during the Late Facet. The Late Facet Chicago Orange: Chucun Variety has a self slip, that resembles the clay body for the making of these vessels, in a reddish yellow (5YR 7/6) color, widely used for the large bowls and jars of this type.

During this period, incising as a diagnostic decorative mode used to alter the surface is common, especially in the Guitara Incised: Guitara Variety, and Muxanal Red-on-Cream: Unspecified Variety is common. One or three preslipped incised lines can occur near the rim on the exterior, or on the horizontal everted rims and even as incised-bottomed lines. Incising is very common on flared bowls and tecomates. Chamfering or the clapboard effect is another important technique during this period, and is applied to decorate tecomate and bowl forms. Chamfering usually begins near the rim only, or it can continue down to the base.

C.- *Forms of the Late Facet of the Chaakkax Ceramic Complex*

The jar form is introduced for the Chicago Orange: Chucun Variety type, during the Late Facet of the Chaakkax Ceramic Complex (Table 5.15). The bowl form (90.32%) continues to be the dominant form and the tecomate declined in use. It is possible that the introduction of the jar form (8.06%) substitutes for the tecomate (1.61%).

Table 5.15. Forms of the Late Chaakkax Ceramic Complex

Operation I (Structure 18)				
Type	Bowls	Tecomate	Jars	Base
Joventud Red: Unspecified Variety	18	2		
Guitara Incised: Guitara Variety	34			1
Chicago Orange: Chucun Variety	35	1	15	
Muxanal Red on Cream: Unspecified Variety	81			
TOTAL	**168**	**3**	**15**	**1**

A bowl with outcurved sides continues to be made during this Facet in the following types: Guitara Incised: Guitara Variety type and the Muxanal Red-on-Cream: Unspecified Variety. Joventud Red: Unspecified Variety includes a bowl with incurved sides and outflared neck and a tecomate form. The Chicago Orange: Chucun Variety forms are represented by a bowl with outcurved sides and a jar with a short outcurved neck (Tables 16, 17 and 18).

Table 5.16. Forms of Guitara Incised: Guitara Variety

Forms	Number of Sherd Rims	Percentage
Bowls	34	97.14%
Tecomate	1	2.85%
TOTALS	**35**	**100.00%**

Table 5.17. Forms of Joventud Red: Unspecified Variety

Forms	Number of Sherd Rims	Percentage
Bowls	18	90.00%
Tecomates	2	10.00%
Total Rims	**20**	**100.00%**

Table 5.18. Forms of Chicago Orange: Chucun Variety

Forms	Number of Sherd Rims	Percentage
Bowls	35	68.63%
Jars	15	29.41%
Tecomate	1	1.96%
Total Rims	**51**	**100.00%**

IV.- DIAGNOSTIC CERAMIC CHARACTERISTICS OF THE K'ATABCHE'KAX CERAMIC COMPLEX

A.- *General Characteristics of the K'atabche'kax Ceramic Complex*

The K'atabche'kax ceramics are a continuation of the Chaakkax Ceramic Complex with very strong innovations. The K'atabche'kax ceramics relates to the widespread Chicanel Ceramic Sphere. In contrast to the Chaakkax Ceramic Complex, the frequency of ceramic types increased for the K'atabche'kax Ceramic Complex (Table 5.19). The total sample of sherds in the K'atabche'kax Ceramic Complex was classified into 31 types or varieties that are listed in Table 5.20.

Table 5.19. Provenience and Number of Sherds for the K'atabche'kax Ceramics

Operation I (Structure 18)	Operation VII (Structure 98)	Operation VIII (Structure 102)	Operation X (Structures 32-35 and 94)	Operation XI (Structure 27)	Operation XII (Structure 28)	Operation XIII (Structure 93)	Total
6791	4689	1108	3220	7625	5240	991	**29, 070**
23.36%	16.31%	3.81%	11.07%	26.22%	18.02%	3.40%	**100.00%**

B.- *Wares of the K'atabche'kax Ceramic Complex*

The K'atabche'kax Ceramic Complex is represented by a variety of pastes with different textures, ranging from fine, to medium, to coarse. The medium and the coarse textured pastes were used mainly for jars or bowls with outcurved sides. The monochrome pottery of the entire complex is dominated by the Sierra Group (Table 5.21). In this group, the following types are included: Lagartos Punctated: Lagartos Variety, Laguna Verde Incised: Laguna Variety, Laguna Verde Incised: Grooved Variety, Puletan Red and Unslipped: Puletan Variety, Repollo Impressed: Unspecified Variety, Sierra Red: Sierra Variety, Sierra Red: Gadrooned Variety, Sierra Red: Unspecified Variety, Society Hall: Society Hall Variety, Society Hall: Society Hall Impressed Variety, Union Appliqué: Unspecified Variety. Sierra Group comprises 32.64% of the entire complex, followed by the striated Uaxactun Unslipped Ware (17.43%). The Chicago group (48.75%) is still very significant in quantitative terms.

Table 5.20. Types and Varieties of the K'atabche'kax Ceramic Complex by Operation.

Types and Varieties	Total Number of Sherds	Percentage of Total Number of sherds	Percentage of Total in Operation VII (Structure 98)	Percentage of Total in Operation I (Structure 18)	Percentage of Total in Operation VIII (Structure 102)	Percentage of Total in Operation X (Structures 32-35 and 94)	Percentage of Total in Operation XI (Structure 27)	Percentage of Total in Operation XII (Structure 28)	Percentage of Total in Operation XIII) Structure 93
Chicago Orange: Chucum Variety	14317	48.76	29.18	62.58	23.63	14.91	58.11	88.47	0.20
Black Rock Red: Black Rock Variety	56	0.19	0.00	0.00	0.00	0.00	0.73	0.00	0.00
Guitara Incised:Guitara Variety	103	0.35	0.00	1.05	0.00	0.00	0.22	0.30	0.00
Joventud Red: Unspecified Variety	1243	4.23	0.00	11.46	0.00	0.00	5.15	1.45	0.00
Joventud Red: Jolote Variety	103	0.35	0.00	0.00	0.00	0.00	0.00	2.08	0.00
Muxanal Red-on-Cream: Unspecified Variety	121	0.41	0.00	1.55	0.00	0.00	0.07	0.22	0.00
Sapote Striated:Unspecified Variety:	445	1.52	10.35	0.06	0.73	3.91	0.00	0.28	2.93
Flor Cream: Unspecified Variety	48	0.16	1.50	0.10	0.00	0.16	0.00	0.00	0.00
Lagartos Punctated: Lagartos Variety	12	0.04	0.00	0.00	0.00	0.00	0.16	0.00	0.00
Laguna Verde Incised: Laguna Verde Variety	16	0.05	0.12	0.00	0.00	0.03	0.09	0.06	0.40
Laguna Verde Incised: Grooved Variety	3	0.01	0.00	0.01	0.18	0.00	0.00	0.00	0.00
Monkey Falls Striated: Monkey Falls Variety	4656	15.86	61.06	0.57	13.19	32.89	7.90	2.16	87.59
Monkey Falls Striated: Unspecified (Brown) Variety	22	0.07	0.52	0.00	0.09	0.34	0.01	0.00	0.00
Sierra Red: Sierra Variety	6104	20.79	50.06	19.13	47.99	36.93	19.57	4.98	8.78
Sierra Red:Unspecified Variety	4	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.00
Sierra Red:Gadrooned Variety	52	0.18	0.50	0.29	0.46	0.06	0.17	0.00	0.00
Society Hall: Society Hall Variety	1374	4.68	29.66	3.09	11.54	9.78	3.79	0.00	0.00
Society Hall: Impressed Variety	3	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Hillbank Red:Hillbank Variety	510	1.74	14.36	0.00	0.27	0.09	3.84	0.00	0.00
Union Appliqué:Unspecified Variety	10	0.03	0.15	0.01	0.00	0.00	0.09	0.00	0.00
Polvero Black: Unspecified Variety	2	0.01	0.12	0.00	0.00	0.03	0.00	0.00	0.00
Puletan Red-and-Unslipped: Puletan Variety	1	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Repollo Impressed: Repollo Variety	3	0.01	0.00	0.01	0.00	0.00	0.03	0.00	0.00
Unnamed Orange-on-Cream	29	0.10	0.75	0.00	0.00	0.00	0.00	0.00	0.00
Unnamed Red-on-Orange	6	0.02	0.05	0.01	0.00	0.09	0.00	0.00	0.00
Aguacate Orange: Aguacate Variety	26	0.09	0.60	0.00	0.00	0.09	0.00	0.00	0.00
Guacamallo Red-on-Orange: Guacamallo Variety	21	0.07	0.36	0.00	0.00	0.19	0.01	0.00	0.00
Ixcanrio Orange Polychrome: Ixcanrio Variety	75	0.26	1.27	0.00	1.92	0.47	0.01	0.00	0.00
TOTAL	29365	100%	100%	100%	100%	100%	100%	100%	100%

Table 5.21. Wares of the K'atabche'kax Ceramic Complex

WARES	Types	Number of Sherds	Percentage of the Ware in the K'atabche'kax Ceramic Complex
The Red Ware			
Flores Waxy	Black Rock Red: Black Rock Variety	56	0.19%
	Guitara Incised: Guitara Variety	103	0.35%
	Joventud Red: Unspecified Variety	1243	4.23%
	Joventud Red: Jolote Variety	103	0.35%
Paso Caballo Waxy Ware	Lagartos Punctated: Lagartos Variety	12	0.04%
	Laguna Verde Incised: Laguna Verde Variety	16	0.05%
	Laguna Verde Incised: Grooved Variety	3	0.01%
	Sierra Red: Sierra Variety	6104	20.79%
	Sierra Red: Unspecified Variety	4	0.01%
	Sierra Red: Gadrooned Variety	52	0.17%
	Society Hall: Society Hall Variety	1374	4.68%
	Society Hall: Society Hall Impressed	1	0.00%
	Union Appliqué: Unspecified Variety	10	0.03%
	Repollo Impressed: Unspecified Variety	3	0.01%
Gale Greek Red	Hillbank Red: Hillbank Variety	510	1.73%
	TOTAL	9593	32.64%
Striated Ware			
Uaxactun Unslipped	Sapote Striated: Unspecified Variety	445	1.51%
	Monkey Falls Striated: Monkey Falls Variety	4656	15.85%
	Monkey Falls Striated: Unspecified (Brown) Variety	22	0.07%
	TOTAL	**5123**	**17.43%**
Orange Ware			
Fort George Orange	Chicago Orange: Chucun Variety	14317	48.75%
Holmul Orange	Aguacate Orange: Aguacate Variety	26	0.08%
	TOTAL	**14,343**	**48.83%**

Table 5.21 (Continuation). Wares of the K'atabche'kax Ceramic Complex.

WARES	Types	Number of Sherds	Percentage of the Ware in the K'atabche'kax Ceramic Complex
Red-on-Orange Ware			
	Unnamed Usulutan: Unnamed Red-on-Orange	6	0.02%
Holmul Orange Ware	Aguacate Orange: Aguacate Variety	21	0.07%
	Ixcanrio Orange Polychrome: Ixcanrio Variety	75	0.26%
	TOTAL	**102**	**0.35%**
Red-on-Cream Ware			
Flores Waxy Ware	Muxanal Red-on-Cream: Unspecified Variety	121	0.41%
Orange-on-Cream Ware			
Paso Caballo Waxy Ware	Unnamed Orange-on-Cream	29	0.10%
Cream Ware			
Paso Caballo Waxy Ware	Flor Cream: Unspecified Variety	48	0.16%
Black Ware			
Paso Caballo Waxy Ware	Unnamed Orange-on-Cream	29	0.10%
	TOTAL	**29,365**	**100%**

Black slipped ceramics of Polvero Ceramic Group constitute a minor monochrome class (0.01%).

The Sierra Group bears a red-fired slip (10R 5/6) with a waxy texture. A diagnostic of this group is preslip and often multiple, circumferential incised or grooved lines that occur on the upper surfaces of everted rims. Other forms of decoration include incising, gadrooning, fluting, punctating and impressing. Painted decoration also occurs on dichrome vessels (0.86%), but is less common. The incised designs appear to be simple geometric or naturalistic figures located on the exterior of a flaring rim or flange. Vertical fluting and gadrooning occur primarily on vases with vertical sides or on bowls with incurved-recurved or vertical sides. Reed or fingernail impressing is present on slipped surfaces. Punctation is extremely rare and usually limited to a single or double row of punctates encircling a jar or bowl form or at the neck juncture. It is accompanied, occasionally, by incising.

C.- *Forms of the K'atabche'kax Ceramic Complex.*

Concerning vessel form, there is far more variety in K'atabche'kax than there was in Chaakkax times. The tecomate form disappears completely in favor of the bowl with incurved sides and the jar form. Jar forms feature short, outcurved necks with a direct rim and rounded lip. Jars are very common for the Chicago Orange: Chucun Variety, Monkey Falls Striated: Monkey Falls Variety and Sapote Striated: Unspecified Variety. Jars with a vertical neck are representative of Sierra Red: Sierra Variety. The Sierra Group is characterized by flared bowls, often bearing single or multiple preslip grooving on an everted rim and a lateral medial flange. The bases of bowl, plate and vase forms are generally flat. Vessel spouts and handles appear mainly on the jar forms (Table 5.22).

Table 5.22. Forms of the K'atabche'kax Ceramic Complex

Type	Bowls	Bowls with Flanges	Jars	Total Number of Rim Sherds	Handles	Spouts
Chicago Orange: Chucun Variety	40		82	122	1	
Flor Cream: Unspecified Variety	4			4		
Laguna Verde Incised: Laguna Verde Variety	1			1		
Laguna Verde Incised: Grooved Variety	1			1		
Monkey Falls Striated: Monkey Falls Variety	22		150	172		
Monkey Falls Striated: Unspecified (Brown) Variety	1		20	21		
Unnamed Orange-on-Cream	18		2	20		
Polvero Black: Unspecified Variety	1			1		
Repollo Impressed: Unspecified Variety	2			2		
Sapote Striated: Unspecified Variety			8	8		
Sierra Red: Gadrooned Variety	2			2		
Sierra Red: Sierra Variety	1079	34	654	1767	2	4
Society Hall: Society Hall Variety	101	1	45	147		
Union Appliqué: Unspecified Variety			1	1		
TOTAL	**1272**	**35**	**962**	**2269**	**3**	**4**
TOTAL	**56.05%**	**1.54%**	**42.39%**	**100%**		

V.- DIAGNOSTIC CERAMIC CHARACTERISTICS OF THE EARLY FACET OF THE K'ATABCHE'KAX CERAMIC COMPLEX.

A.- *General Characteristics of the Early Facet of the K'atabche'kax Ceramic Complex*

The typological data obtained by the excavations in Operation I established a solid basis from which to subdivide the K'atabche'kax Ceramic Complex into three facets: Early, Late, and Terminal. Complementary ceramic data from Operation XI and XII (Table 5.23) help to the establishment of an Early Facet. The absence of Xe, Jenney Creek or Real related types in the subsequent levels suggests the beginning of the K'atabche'kax Ceramic Complex and its correspondent Early Facet. The entire sample of sherds from the Early Facet of the K'atabche'kax

Ceramic Complex was classified into 13 types and varieties. These types and varieties are listed in Table 5.24, including its frequencies.

Table 5.23. Provenience and Number of Sherds of the Early Facet of the K'atabche'kax Ceramic Complex.

Operation I (Structure 18)	Operation XI (Structure 27)	Operation XII (Structure 28)	TOTAL
5772 Sherds	2482 Sherds	4632 Sherds	**8398**
68.73%	29.55%	1.71%	**100.00%**

The ceramic fragments indicate a continuation of the Chaakkax Ceramic Complex types such as Chicago Orange: Chucun Variety, Joventud Red: Unspecified Variety, Guitara Incised: Guitara Variety, and Muxanal Red-on-Cream: Unspecified Variety. New types, however, are introduced during this time. The evidence suggests that Chicago Orange: Chucun Variety continues to be, statistically, a predominant type. The dominance of this cooking ware signals an increase of household activities. During the Early Facet, the presence of Sierra Red: Sierra Variety (12.48%) is more restricted to ritual contexts. Gradually, Sierra Red: Sierra Variety is going to replace the Joventud Red: Unspecified Variety type (9.26%). Therefore, the statistically minor representation of Puletan Red and Unslipped: Puletan Variety, Union Appliqué: Unspecified Variety, Sierra Red Unspecified and Society Hall: Society Hall Variety indicates that the beginning of the production of these types will be more significant during the Late Facet of the K'atabche'kax Ceramic Complex (Table 5.24).

B.- *Wares of the Early Facet of the K'atabche'kax Ceramic Complex*

The Early Facet of the K'atabche'kax Ceramic Complex is represented by a variety of pastes, with a fine to medium texture. Medium texture paste was used for the vessels of Flor Cream: Unspecified Variety. Like the vessels of the Chaakkax Ceramic Complex, the Early Facet of the K'atabche'kax Ceramic Complex is a monochrome period (96.90%) although dichrome decoration (1.32%) is still represented by the Muxanal Red-on-Cream: Unspecified Variety. Dichrome decoration will not continue as a main characteristic of the Early Facet of the

Table 5.24 Types and Varieties: the Early K'atabche'kax Ceramic Complex.

Types and Varieties	Total Number of Sherds	Percentage of Total Number of sherds	Percentage of Total in Operation I (Structure 18)	Percentage of Total in Operation XI (Structure 27)	Percentage of Total in Operation XII (Structure 28)
Chicago Orange: Chucun Variety	6291	74.91	68.87	87.79	95.83
Black Rock Red: Black Rock Variety	56	0.67	0.00	2.26	0.00
Guitara Incised: Guitara Variety	71	0.85	1.23	0.00	0.00
Joventud Red: Unspecified Variety	778	9.26	13.48	0.00	0.00
Muxanal Red-on-Cream: Unspecified Variety	111	1.32	1.82	0.00	4.17
Flor Cream: Unspecified Variety	2	0.02	0.03	0.00	0.00
Lagartos Punctated: Lagartos Variety	1	0.01	0.00	0.04	0.00
Laguna Verde Incised: Laguna Verde Variety	6	0.07	0.00	0.24	0.00
Sierra Red: Sierra Variety	1048	12.48	14.00	9.67	0.00
Sierra Red: Unspecified Variety	4	0.05	0.07	0.00	0.00
Society Hall: Society Hall Variety	28	0.33	0.49	0.00	0.00
Puletan Red-and-Unslipped: Puletan Variety	1	0.01	0.00	0.00	0.00
Union Appliqué: Unspecified Variety	1	0.01	0.02	0.00	0.00
TOTAL	**8398**	**100.00%**	**100.00**	**100.00**	**100.00**

K'atabche'kax Ceramic Complex because the cream slip begins to be applied as a monochrome color on the vessels of the Flor Cream: Unspecified Variety type. Most slipped vessels have a waxy texture, but not so strongly marked as the wares of the Mamom sphere (Table 5.25).

The use of red monochrome slipping continues to be a preferred technique to decorate the vessels of the K'atabche'kax Ceramic Complex. A total of 1994 sherds, representing 28.01% of the entire complex, and ten complete vessels were red slipped within the Paso Caballo Waxy Ware. In comparison, 905 sherds belong to the Flores Waxy Ware, representing 10.78% of the Early Facet. A red (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6) slip color covered the vessels belonging to the Sierra Group. The slip is still highly polished, giving a waxy texture to the vessels.

Within the Flores Waxy ware is the Joventud Red: Unspecified Variety and the Guitara Incised: Guitara Variety types. The slip maintains its red (2.5YR 4/6), reddish brown (2.5YR 4/3), or dark reddish brown (2.5YR 3/3) color on the Joventud Red: Unspecified Variety type and on the Guitara Incised: Guitara Variety type (red 10R 4/0; 10R 5/8 or a very dusky red 10R 2.5/2). The differences between Joventud Red: Unspecified Variety and Sierra Red: Sierra Variety, at the ware level, are well marked at K'axob. The Joventud Red: Unspecified Variety paste has a finer and more compact texture than Sierra Red: Sierra Variety. The latter has a fine granular textured paste. The Joventud Red: Unspecified Variety type paste is redder (reddish yellow 5YR 6/8) in color, in comparison to the Sierra Red types (red 2.5YR 5/8). According to Kosakowsky (1987a, 43), the red color and the waxier texture of Joventud Red: Unspecified Variety are basic elements used to separate this type from Sierra Red: Sierra Variety. At K'axob, the Joventud Red: Unspecified Variety slip tends be of a darker red color (red 2.5YR 4/6; reddish brown 2.5YR 4/3; or dark reddish brown 2.5YR 3/3), reaching an almost burgundy color. The Sierra Red slip, on the other hand, occurs in a red color (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6). Another significant difference between Joventud Red: Unspecified Variety and Sierra Red is the ease with which Joventud Red: Unspecified Variety slip crackles. Also, the Joventud Red: Unspecified Variety slip is thicker than the one used for the Sierra Group types.

Table 5.25. Wares of the Early Facet of the K'atabche'kax Ceramic Complex

WARES	Types	Number of Sherds	Percentage of the ware in the Early Facet of the K'atabche'kax Ceramic Complex
The Red Ware			
Flores Waxy Ware	Black Rock Red: Black Rock Variety	56	0.67%
	Guitara Incised: Guitara Variety	71	0.85%
	Joventud Red: Unspecified Variety	778	9.26%
Paso Caballo Waxy Ware	Lagartos Punctated: Lagartos Variety	1	0.01%
	Laguna Verde Incised: Laguna Verde Variety	6	0.07%
	Sierra Red: Sierra Variety	1048	12.48%
	Sierra Red: Unspecified Variety	4	0.05%
	Society Hall: Society Hall Variety	28	4.68%
	Puletan Red-and-Unslipped: Puletan Variety	1	0.01
	Sierra Red: Gadrooned Variety	52	0.17%
	Union Appliqué: Unspecified Variety	1	0.03%
	TOTAL	1994	28.01%
Orange Ware			
Fort George Orange Ware	Chicago Orange: Chucun Variety	6291	68.87%
Red-on-Cream Ware			
Flores Waxy Ware	Muxanal Red-on-Cream: Unspecified Variety	111	1.32%
Cream			
Flores Waxy Ware	Pital Cream: Pital Variety	2	0.02%
	TOTAL	**8398**	**100%**

The vessels of Chicago Orange: Chucun Variety continue to predominate in quantity during the entire facet, as 74.91% of the total sherds correspond to this variety. The Chicago Orange group presents a darker slip color (light reddish yellow 5YR 6/8), in comparison, with the vessels of the earlier Chaakkax period.

During the Early Facet, Sierra Red: Unspecified Variety and Laguna Verde Incised: Laguna Variety are examples of modes that originated during Xe times and endure up to the transition from Mamom to Chicanel times. Chamfering almost disappears during this transitional period and bichrome decoration continues only in the Muxanal Red-on-Cream: Unspecified Variety, but will disappear during Chicanel times.

Instead, plain incising (1.38%) dominates as a preferred decorative mode to alter the surface during this period, especially in the Guitara Incised: Guitara Variety, Muxanal Red-on-Cream: Unspecified Variety, Sierra Red: Unspecified Variety and Laguna Verde Incised: Laguna Verde Variety. One to three lines are incised near the exterior or on the horizontal everted part of the rim. Lines were also incised, near the base of the vessels. The incised lines formed geometric motifs, such as half circles, diagonal or rectilinear-curvilinear patterns. Incising is very common on dishes, flared or outcurved bowls or vases with outcurved sides.

C.- *Forms of the Early Facet of the K'atabche'kax Ceramic Complex*

During the Early Facet, the tecomate form almost disappears. It is totally absent in Operation XII and has also declined in use in Operation XI; although in Operation I, its presence is still considerable. The predominant forms during the K'atabche'kax Early Facet are bowls and jars. Most bowls have flared sides and the jars have a short outcurved neck. Rims on most jars and bowls are direct with a rounded lip. On certain jars with a direct rim, the lip is slightly pointed, beveled-in or squared. The base of the jar form is usually rounded. Bowls are also made with an everted rim and a rounded lip, to a horizontal everted rim and a grooved lip. Generally, the base is flat for most bowls. An incurved base occurs more rarely (Table 5.26). The same form of jar is also abundant in the Sierra Red: Sierra Variety, but, a jar with vertical neck was also identified. The rim for this last form is direct with a rounded lip. The vertical neck is short, measuring 3 cm in diameter. Jars of Sierra Red: Sierra Variety type can include appendages such as spouts and handles (Table 5.26).

Table 5.26. Forms of the Early Facet of the K'atabche'kax Ceramic Complex

Operation XII (Structure 28)			
Type	Bowls	Jars	TOTAL
Guitara Incised: Guitara Variety	13		13
Muxanal Red-on-Cream: Unspecified Variety	4	1	4
Sierra Red: Sierra Variety	23		24
TOTAL	**40**	**1**	**41**
TOTAL	**95.76%**	**2.43%**	**100%**

Operation XI (Structure 27)				
Type	Bowls	Tecomates	Jars	TOTAL
Joventud Red: Unspecified Variety		2	3	5
Laguna Verde Incised: Laguna Verde Variety	7			7
Lagartos Punctated: Lagartos Variety			4	4
TOTAL	**7**	**2**	**7**	**16**
TOTAL	**43.75%**	**12.50%**	**43.75%**	**100%**

Operation I (Structure 18)						
Type	Bowls	Tecomates	Jars	**TOTAL**	Spouts	Handles
Muxanal Red-on-Cream: Unspecified Variety		23		**23**		
Joventud Red: Unspecified Variety		34	1	**35**		
Guitara Incised: Guitara Variety		7		**7**		
Laguna Verde Incised: Laguna Verde Variety		1		**1**		
Chicago Orange: Chucun Variety	39	50	57	**146**	1	1
Sierra Red: Sierra Variety	191		176	**367**		
Society Hall: Society Hall Variety	37			**37**		
TOTAL	**267**	**115**	**234**	**616**	**1**	**1**
TOTAL	**43.34**	**18.68%**	**37.98%**	**100%**		

Bowls in the Sierra Red: Sierra Variety present flared sides and vary greatly in rim shape. The rims can be direct with a rounded lip, everted with a rounded lip, and horizontal everted with a grooved lip. The estimated diameters for these flaring bowls vary from 22 to 42 cm. The height of these bowls measures 9 to 10 cm. The base for most bowls is flat, although an incurved base is associated with a horizontal everted rim with a rounded lip. The flared bowl with a direct rim and rounded lip of Laguna Verde Incised: Laguna Variety is smaller, although the walls are thicker than the bowls of Sierra Red: Sierra Variety. The estimated diameter ranges from 14 to 20 cm and the thickness of walls from .7 to .8 cm.

VI.- DIAGNOSTIC CERAMIC CHARACTERISTICS OF THE LATE FACET OF THE K'ATABCHE'KAX CERAMIC COMPLEX

A.- *General Characteristics of the Late Facet of the K'atabche'kax Ceramic Complex*

The K'atabche'kax Ceramic Complex relates to well-known and well-established Chicanel types in the Central and the Pasion zones (Adams and Culbert 1977). The ceramic fragments in the Late Facet of the K'atabche'kax Ceramic Complex were found in Operation I, VII, VIII, X, XI, and XII (Table 5.27). The sherds of the Late Facet were classified into 19 types or varieties and are listed in Table 5.28.

Table 5.27. Provenience and Number of Sherds of the Late Facet of the K'atabche'kax Ceramic Complex

Operation VII (Structure 98)	Operation I (Structure 18)	Operation VIII (Structure 102)	Operation X (Structures 32-35 and 94)	Operation XI (Structure 27)	Operation XII (Structure 28)	**TOTAL**
256	1010	420	1654	2743	3411	**9494**
2.70%	10.73%	4.42%	17.42%	28.89%	35.93%	**100%**

Table 5.28. Types and Varieties: The Late K'atabche'kax Ceramic Complex

Types and Varieties	Total Number of Sherds	Percentage of Total Number of sherds	Percentage of Total in Operation VII (Structure 98)	Percentage of Total in Operation I (Structure 18)	Percentage of Total in Operation VIII (Structure 102)	Percentage of Total in Operation X (Structures 32-35 and 94)	Percentage of Total in Operation XI (Structure 27)	Percentage of Total in Operation XII (Structure 28)
Chicago Orange: Chucun Variety	5349	56.34	8.98	27.03	23.57	14.87	60.70	89.21
Guitara Incised: Guitara Variety	32	0.34	0.00	0.00	0.00	0.00	0.62	0.44
Joventud Red: Unspecified Variety	465	4.90	0.00	0.00	0.00	0.00	14.33	2.11
Joventud Red: Jolote Variety	103	1.08	0.00	0.00	0.00	0.00	0.00	3.02
Muxanal Red: Unspecified Variety	10	0.11	0.00	0.00	0.00	0.00	0.18	0.15
Sapote Striated: Unspecified Variety:	41	0.43	6.64	0.40	0.00	1.21	0.00	0.00
Flor Cream: Unspecified Variety	7	0.07	0.78	0.50	0.00	0.00	0.00	0.00
Laguna Verde Incised: Grooved Variety	2	0.02	0.00	0.10	0.24	0.00	0.00	0.00
Monkey Falls Striated: Monkey Falls Variety	424	4.47	25.78	3.66	2.86	16.32	1.35	0.06
Monkey Falls Striated: Unspecified (Brown) Variety	5	0.05	0.39	0.00	0.00	0.18	0.04	0.00
Polvero Black:Unspecified Variety	1	0.01	0.00	0.00	0.00	0.06	0.00	0.00
Sierra Red: Sierra Variety	2259	23.79	28.52	48.42	66.43	53.99	12.91	5.01
Sierra Red: Gadrooned Variety	37	0.39	0.78	1.98	1.19	0.12	0.29	0.00
Society Hall: Society Hall Variety	689	7.26	17.97	17.72	5.48	13.18	8.13	0.00
Society Hall: Impressed Variety	2	0.02	0.00	0.00	0.00	0.06	0.04	0.00
Hillbank Red: Hillbank Variety	62	0.65	10.16	0.00	0.24	0.00	1.28	0.00
Union Appliqué:Unspecified Variety	2	0.02	0.00	0.00	0.00	0.00	0.07	0.00
Repollo Impressed: Unspecified Variety	3	0.03	0.00	0.10	0.00	0.00	0.07	0.00
Unnamed Red-on-Orange	1	0.01	0.00	0.10	0.00	0.00	0.00	0.00
TOTAL	**9494**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

The introduction of the striated ware is one of the most significant changes from the Early to the Late Facet. Minor wares, such as the resist ware, correspond probably to modes affiliated to the Guatemala Highlands, Honduras and El Salvador zones. These occurrences suggest, strongly, that K'axob was participating within the sphere of ceramic interaction in the Peten and adjacent areas, during Late Preclassic times.

B.- *Wares of the Late Facet of the K'atabche'kax Ceramic Complex*

The same range of pastes continues to be present during the Late Facet of the K'atabche'kax Ceramic Complex. Percentages and macroscopical observations during the ceramic analysis suggest that medium and coarse textured pastes continue to be used for jars or bowls with outcurved sides, while the rest of the forms bear a fine or medium textured paste (Table 5.29). A medium texture paste was used for the vessels of the Sierra Group and the Sapote Striated: Unspecified Variety. The coarse paste was preferred for the Monkey Falls Striated: Monkey Falls and Unspecified (Brown) Varieties.

The monochrome pottery of the Late Facet is dominated by the Sierra Group, although the waxy feel is less strongly marked than in the previous Chaakkax Ceramic Complex. Red slips (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6) were used for the vessels of the Late Facet. A total of 3623 sherds, representing 38.50% of the monochrome pottery of the Late Facet bore red slip and was associated with the Paso Caballo Waxy Ware, Gale Creek Red, and the Flores Waxy Ware. Within the Paso Caballo Waxy Ware is the Sierra Red: Sierra Variety, Society Hall: Society Hall Variety, Society Hall: Society Hall Impressed, Laguna Verde Incised: Grooved Variety, Repollo Impressed: Unspecified Variety, Union Appliqué: Unspecified Variety (Table 5.29).

Another relevant red monochrome is the type Hillbank Red: Hillbank Variety that, according to Gifford (1976), is restricted to a later time than Sierra Red: Sierra Variety. At K'axob, Hillbank Red: Hillbank Variety appears at the end of the Late Facet. I suggest that it is a type closely associated in time to Protoclassic deposits, as it only occurs at Operation VII, Operation VIII, and

Table 5.29. Wares of the Late Facet of the K'atabche'kax Ceramic Complex.

WARES	Types	Number of Sherds	Representation of the Ware in the K'atabche'kax Ceramic Complex
The Red Ware			
Flores Waxy	Guitara Incised: Guitara Variety	32	0.34%
	Joventud Red: Unspecified Variety	465	4.90%
	Joventud Red: Jolote Variety	103	1.08%
Paso Caballo Waxy Ware	Laguna Verde Incised: Grooved Variety	2	0.02%
	Sierra Red: Sierra Variety	2258	23.79%
	Sierra Red: Sierra Gadrooned Variety	37	0.39%
	Society Hall: Society Hall Variety	689	7.26%
	Society Hall: Society Hall Impressed	2	0.02%
	Union Appliqué: Unspecified Variety	2	0.02%
	Repollo Impressed: Unspecified Variety	3	0.03%
	Hillbank Red: Hillbank Variety	62	0.65%
	TOTAL	**3623**	**38.50%**
Striated Ware			
Uaxactun Unslipped	Sapote Striated: Unspecified Variety	41	0.43%
	Monkey Falls Striated: Monkey Falls Variety	424	4.47%
	Monkey Falls Striated: Unspecified (Brown) Variety	5	0.05%
	TOTAL	**470**	**5.04%**
Orange Ware			
Fort George Orange	Chicago Orange: Chucun Variety	5349	56.34%
Red-on-Orange Ware			
	Unnamed Usulutan: Unnamed Red-On-Orange	1	0.01%
Red-on-Cream Ware			
Flores Waxy Ware	Muxanal Red-on-Cream: Unspecified Variety	10	0.11%
Cream Ware			
Paso Caballo Waxy Ware	Flor Cream: Unspecified Variety	7	0.07%
Black Ware			
Paso Caballo Waxy Ware	Polvero Black: Unspecified Variety	1	0.01%
	TOTAL	**9494**	**100%**

Operation XI where pottery pertaining to this period was identified. Noticeable within its distribution at the site, Hillbank Red: Hillbank Variety is absent at Operation I, an excavation that did not yield Floral Park ceramics. Gifford noted at Barton Ramie that the deposits containing Hillbank Red: Hillbank Variety did not have Sierra Red: Sierra Variety sherds (Gifford 1976). Clearly, this pattern holds in Operation I, but not in other structures.

The Flor Ceramic Group represents only .07% of the Late Facet. It is characterized by a thin white (5YR 8/1) waxy slip. Black (2.5YR 2.5/0) slipped ceramics of the Polvero Ceramic Group make up .01% of monochrome pottery. In comparison with the Early Facet, the striated wares appear during this Facet. The unslipped ceramics from K'axob are of Uaxactun Unslipped Ware. Three types belong to this ware, the Monkey Falls Striated: Monkey Falls and Unspecified (Brown) Varieties, and the Sapote Striated: Unspecified Variety. The striated unslipped ware is a significant component of the Complex, representing 5.04% of the total Facet.

At K'axob, Usulutan pottery is extremely interesting. Unnamed Usulutan Group: Unnamed Red-on-Orange makes its appearance in this phase. It was found in late Chicanel contexts at Seibal. Usulutan imitations occur also at Altar de Sacrificios (Adams 1971:28), Becan (Ball 1977a:50), Edzna (Forsyth 1983:53-55) and El Mirador (Forsyth 1989:127-128). It is possible, then, that Red-on-Orange slipped ceramics such as Society Hall: Society Hall Variety could be closely related in time to these traditions. The Society Hall: Society Hall Variety shares all the attributes of the Sierra Group, except for the application of red (2.5YR 5/6) slip color, to produce streaky horizontal variations. It seems that the red color was applied as a base to the light red (10R 6/8) slip color, that was added with a cloth or a brush. The Sierra Red: Gadrooned Variety is likely to be a transitional type between the Sierra Red: Sierra Variety and the varieties of Society Hall type because the same slip colors were used to decorate these vessels, achieving a mottled rather than a streaky effect.

Other forms of decoration include applications, fluting, gadrooning, impressing, incising, modeling and punctation. Grooving and incising are important decorative modes developed during K'atabche'Kax time, for altering the surface. Incising predominates more than grooving,

especially in Laguna Verde Incised: Grooved Variety, Sierra Red: Sierra Variety. Pre-slip incising is also common during the Late Facet. Incising is based on line designs, in simple linear and more complicated curvilinear-rectilinear arrangements or complex symbolic forms. Preslip incised circumferential lines occur on the exterior part of the flaring rim or flange. Incising is very common on dishes, flared or outcurved bowls or vases with outcurved sides.

Striation is used strictly for the jars of Monkey Falls Striated: Monkey Falls and Unspecified (Brown) Varieties, and the Sapote Striated: Unspecified Variety. Groove-incising, fluting and gadrooning are very common in the Sierra Group. The same decorative techniques occur on the Polvero group vessels as on Sierra Group pottery, especially, the circumferential incisions near the rim.

Grooving is another form of decoration, usually encircling the surface of an everted rim. Regular fluting was practiced vertically on the red vases of Sierra Red: Sierra Variety, during the Late Facet. Impressing is common in the Society Hall: Society Hall Impressed Variety. Punctation is used as an outline or a filler for banding on jars. It occurs near the neck juncture of Lagartos Punctated: Lagartos Variety. Impressing is commonly done with a reed on the body vessel of Repollo Impressed: Unspecified Variety. Applications are often used to form a braided fillet, adorned by punctations in the Union Appliqué: Unspecified Variety type. Modeling and applications are a combined technique, normally found on effigy vessels with anthropomorphic features. Monkey appliqué heads were used as decoration for the vessels of Society Hall: Society Hall Variety.

C.- *Forms of the Late Facet of the K'atabche'kax Ceramic Complex*

New forms appeared during the Late Facet of the K'atabche'kax Ceramic Complex (Table 5.30). For example, the vase form was introduced during the Late Facet. By the Late Facet, the tecomate has disappeared completely. Less abundant forms in the ceramic assemblage such as rounded bowls with a restricted orifice and incurved-recurved bowls suggest the continuation of Mamom

Table 5.30. Forms of the Late Facet of the K'atabche'kax Ceramic Complex

Operation VIII (Structure 102)			
Type	Bowls	Jars	Total
Sierra Red: Sierra Variety	109	34	143
Sierra Red: Gadrooned Variety	2		2
Monkey Falls Striated: Monkey Falls Variety		2	2
TOTAL	111	36	147
TOTAL	**75.51%**	**24.48%**	**100%**

Operation X (Structures 32-35 and 94)			
Type	Bowls	Jars	Total
Sierra Red: Sierra Variety	5	1	6
TOTAL	5	1	
TOTAL	**83.33%**	**16.67%**	**100%**

Operation XI (Structure 27)					
Type	Bowls	Jars	**TOTAL**	Bases	Handles
Muxanal Red-on-Cream: Unspecified Variety	1		**1**		
Joventud Red: Unspecified Variety	49	3	**52**		
Guitara Incised: Guitara Variety	13		**13**		
Laguna Verde Incised: Laguna Verde Variety	6		**6**		
Chicago Orange: Chucun Variety	3	**42**	**45**	3	1
Sierra Red: Gadrooned Variety	10		**10**		
Society Hall: Society Hall Variety	202	**40**	**242**		
Hillbank Red: Hillbank Variety		1	**1**		
Sierra Red: Sierra Variety	**65**	**57**	**122**		
Lagartos Punctated: Lagartos Punctated		4	**4**		
Monkey Falls Striated: Monkey Falls Variety		**12**	**12**		
Repollo Impressed: Unspecified Variety		1	**1**		
TOTAL	**349**	**160**	**509**	**3**	**1**
TOTAL %	**68.57%**	**31.43%**	**100%**		

Operation I (Structure 18)			
Type	Bowls	Jars	Total
Flor Cream: Unspecified Variety	1		1
Repollo Impressed: Repollo Variety	1		1
Sierra Red: Gadrooned Variety	5		5
Chicago Orange: Chucun Variety	1	4	5
Sierra Red: Sierra Variety	59	152	211
Society Hall: Society Hall Variety	1		1
TOTAL	**68**	**168**	**236**
TOTAL	**30.09%**	**74.34%**	**100%**

traditions into Chicanel times. Incurved-recurved sides bowls are generally associated with a spout and an outcurved neck during the Late Facet.

The jar form continues the same pattern as in the Early Facet; however, the Late Facet outcurved neck increases its height from 3 cm to 8.4 cm. A jar with a short outcurved neck with a direct rim and rounded lip is still present in the sample of Chicago Orange: Chucun Variety, Monkey Falls Striated: Monkey Falls Variety and Sapote Striated: Unspecified Variety. Jars with vertical neck are very characteristic of Sierra Red: Sierra Variety and Lagartos Punctated: Lagartos Variety. It is very common for jars to have a rim with a pointed lip that in profile almost resembles a flag. The jar also seems to be the only form of Hillbank Red: Hillbank Variety type.

Bowls have a variety of shapes. Bowls in the assemblage have flared sides, an outflared-everted rim with rounded lip, or an exterior thickened rim and a rounded lip; bowls with outcurved sides have a medial flange, everted rim and rounded lip, or a horizontal everted rim and rounded lip. Less common is a bowl with round sides, interior thickened rim and incurved base or a bowl with incurved sides, outflared neck, a rounded lip, and a flat base. Spouted bowls are also present, having incurved-recurved sides and an outcurved neck. It will also be more common for bowls to have vertical sides.

Another common form within the assemblage of Monkey Falls Striated: Monkey Falls Variety, Monkey Falls Striated: Unspecified (Brown) Variety is a basin or a bowl with outcurved sides, direct rim and a squared lip. The bowls of Chicago Orange: Chucun Variety are larger than in the previous Facet. For the Late Facet, Chicago Orange jars present an estimated diameter varying from 22 to 44 cm and the bowls regularly measure 45 cm in diameter. In the Early Facet, average diameter for the jar forms was usually 24 cm. Bowls have outcurved sides with an exterior folded rim that is also common in the jar form with a short outcurved neck. The jar forms present strap handles with small apertures that do not serve well for grasping with the fingers. It is possible that they were ideal for tying a cord to suspend the vessel.

The Sierra Group is characterized by bowls, jars, plates and vases, often bearing single or multiple preslip grooving on the everted rim and a lateral medial flange. The bowl with flared sides is very common in the Laguna Verde Incised: Laguna Variety, Laguna Verde Incised: Grooved Variety. The bowls of Sierra Red: Sierra Variety type are fairly standardized in height, measuring 10 cm, while the diameters vary from 30 to 52 cm. The bases of bowl, plate and vase forms are generally flat and slipped. Vessel spouts and handles appear, mainly on the jar forms.

Dishes have flared sides and a slightly rounded base. The rim is direct and rounded, with 14 cm in diameter. The height of the plate is 2.7 cm and the thickness of the walls varies from .7 to 1 cm. Dishes present an outflared everted rim with a slightly squared lip and an estimated diameter of 16 cm. The base is slightly rounded, measuring 9 cm in diameter.

Forms of Society Hall: Society Hall Variety are restricted to bowls with vertical or outcurved sides. Bowl with flared sides generally has a direct rim and rounded lip; an everted rim and rounded lip, with a flat or a convex base; an everted rim with a beveled-in lip; or an outflared everted rim with rounded lip. The diameters range from 19 to 54 cm for most flared bowls. An interesting characteristic of these bowls is that the base often is decorated with a streaky painted cross band, on the interior or the exterior part of the base. The incurved bowl with outflared neck features the same motif on the exterior part of the base. The vessel also presents two monkey face applications: eyes and mouth were made through perforations. Some vessels of Society Hall: Society Hall Variety have two holes on each side, that presumably were used to tie a rope to suspend or carry the vessel.

Most vessels of Society Hall: Society Hall Variety are also fairly standardized. Usually, the thick vertical walls of these vessels measure from .75 to 1 cm. The vessels have a wide diameter varying in size from 22 to 54 cm. The bowl with outcurved sides, an outflared everted rim, and a rounded lip is the most common form. The flat or incurved base is common for the bowls of Society Hall: Society Variety. The bowl has an estimated diameter varying from 21 to 43 cm. The total height of the vessel ranges from 8.5 to 17.7 cm.

Probably the most standardized vessels of the Late Facet are those of Sierra Red: Gadrooned Variety, presenting encircling grooves on the exterior. The only identified form is a bowl with vertical sides. The diameter of the vessels is usually 16.6 to 26 cm. The height of the vessels is 5.5 cm or between 8.5 and 8.8 cm.

The minority of slipped ceramics belongs to the Flor Cream: Unspecified Variety, Unnamed Orange on Cream, Unnamed Usulutan Group: Unnamed Red on Orange, Polvero Black: Unspecified Variety, Repollo Impressed: Unspecified Variety and Union Appliqué: Unspecified Variety types. The flared bowl is the most common form for these types.

VII.- DIAGNOSTIC CERAMIC CHARACTERISTICS OF THE TERMINAL K'ATABCHE'KAX COMPLEX

A.- *General Characteristics of the Terminal Facet of the K'atabche'kax Ceramic Complex*

The Terminal Facet of the K'atabche'kax Ceramic Complex is a mixture of traditional Chicanel plus new decorative and form modes that are clearly different from the previous Late Facet. Many of the new modes are clearly precursors of the later Early Classic. The Terminal Facet should be understood as a ceramic period that includes orange slipped vessels; as a cultural stage, it marks the transition between the Terminal Facet of the K'atabche'kax and the Early Classic. The ceramics were found in Operation I, VII, VIII, X, XI, XII, XIII (Table 5.31).

Table 5.31. Provenience and Number of Sherds of the Terminal Facet of the K'atabche'kax Ceramic Complex

Operation VII (Structure 98)	Operation I (Structure 18)	Operation VIII (Structure 102)	Operation X (Structures 32-35 and 94)	Operation XI (Structure 27)	Operation XII (Structure 28)	Operation XIII (Structure 93)	TOTAL
4431	9	672	1566	2400	1404	991	11473
38.65%	.08%	5.86%	13.66%	20.94%	12.25%	8.64%	100.00%

The ceramic fragments were classified into 22 types, listed in Table 5.32. The concentration of ceramic material is in Operation VII, where Sierra Red: Sierra Variety (28.26%) and Monkey Falls Striated: Monkey Falls Variety (43.95%) are dominant types. Curiously, Chicago Orange: Chucun Variety lowered its statistical significance in Operation VII (8.82%) and Operation XIII (0.20%), which are the structures that will have a longer Early Classic occupation. The Sierra Red: Sierra Variety is more abundant than Chicago Orange: Chucun Variety (Table 5.32). The Chicago Orange: Chucun Variety, which was a common utilitarian ware has a limited distribution at the site, in comparison with earlier periods. The lesser abundance of Chicago Orange: Chucun Variety suggests that the type will be replaced by the striated wares of the Terminal Facet. Possibly, the striated wares were more appropriate for cooking than the Chicago Orange: Chucun Variety; therefore, the production of Chicago Orange: Chucun Variety diminished in favor of the striated vessels.

Aguacate Orange: Aguacate Variety, Guacamallo Red-on-Orange: Guacamallo Variety and Ixcanrio Orange-Polychrome: Ixcanrio Variety are restricted to ritual contexts, although a few Aguacate Orange: Aguacate Variety sherds appeared as part of fill deposits. The types Unnamed Orange-on-Cream and Unnamed Red-on-Orange indicate contacts with Usulutan traditions.

B.- *Wares of the Terminal Facet of the K'atabche'kax Ceramic Complex*

The Terminal K'atabche'kax Facet is identified mainly by the presence of fine texture pastes of Guacamallo Red-on-Orange: Guacamallo Variety and Ixcanrio Orange-Polychrome: Ixcanrio Variety types. Medium texture pastes, on the other hand, occur in Aguacate Orange: Aguacate Variety type, the Sierra Group and the Sapote Striated: Unspecified Variety type. The coarse paste is used for the Monkey Falls Striated: Monkey Falls and Unspecified (Brown) Varieties (Table 5.33).

A total of 3927 sherds, representing 34.29% of monochrome pottery of the Terminal Facet was red slipped and associated with either the Paso Caballo Waxy or Gale Creek Red Ware. The

Table 5.32 Types and Varieties: the Terminal K'atabche'kax Ceramic Complex.

Types and Varieties	Total Number of Sherds	Percentage of Total Number of sherds	Percentage of Total in Operation VII (Structure 98)	Percentage of Total in Operation I (Structure 18)	Percentage of Total in Operation VIII (Structure 102)	Percentage of Total in Operation X (Structures 32-35 and 94)	Percentage of Total in Operation XI (Structure 27)	Percentage of Total in Operation XII (Structure 28)	Percentage of Total in Operation XIII) Structure 93
Chicago Orange: Chucun Variety	2677	25.33	34.26	22.22	23.66	14.94	24.51	85.90	0.20
Sapote Striated: Unspecified Variety	404	3.52	9.37	0.00	1.19	6.67	0.00	1.00	2.93
Flor Cream: Unspecified Variety	39	0.34	1.48	0.00	0.32	0.00	0.00	0.00	0.00
Lagartos Punctated: Lagartos Variety	11	0.10	0.00	0.00	0.00	0.00	0.46	0.00	0.00
Laguna Verde Incised: Laguna Verde Variety	10	0.09	0.17	0.00	0.00	0.06	0.04	0.21	0.40
Laguna Verde Incised: Grooved Variety	1	0.01	0.00	0.00	0.15	0.00	0.00	0.00	0.00
Monkey Falls Striated: Monkey Falls Variety.	4232	36.90	57.19	22.22	19.64	50.38	23.55	7.48	87.59
Monkey Falls Striated: Unspecified (Brown) Variety	17	0.15	0.51	0.00	0.15	0.51	0.00	0.00	0.00
Sierra Red: Sierra Variety	2797	24.38	46.80	22.22	36.46	18.90	32.90	37.43	5.41
Sierra Red: Gadrooned Variety	15	0.13	0.26	0.00	0.00	0.00	0.21	0.00	0.00
Society Hall: Society Hall Variety	657	5.70	32.13	33.33	15.33	6.19	2.75	0.00	0.10
Society Hall: Impressed Variety	1	0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Hillbank Red: Hillbank Variety	448	3.91	14.88	0.00	0.30	0.19	10.75	0.00	0.00
Union Appliqué: Unspecified Variety	7	0.06	0.20	0.00	0.00	0.00	0.21	0.00	0.00
Polvero Black: Unspecified Variety	1	1.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00
Unnamed Orange-on-Cream	29	0.25	0.75	0.00	0.00	0.00	0.00	0.00	0.00
Unnamed Red-on-Orange	5	0.04	0.05	0.00	0.00	0.19	0.00	0.00	0.00
Aguacate Orange: Aguacate Variety	26	0.23	0.60	0.00	0.00	0.19	0.00	0.00	0.00
Guacamallo Red-on-Orange: Guacamallo Variety	21	0.18	0.36	0.00	0.00	0.38	0.04	0.00	0.00
Ixcanrio Orange Polychrome: Ixcanrio Variety	75	0.65	1.43	0.00	3.13	0.96	0.04	0.00	0.00
TOTAL	**11473**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Table 5.33. Statistical Representation of the Wares of the Late Facet of the K'atabche'kax Ceramic Complex

WARES	Types	Number of Sherds	Representation of the Ware in the K'atabche'kax Ceramic Complex
The Red Ware			
Paso Caballo Waxy Ware	Lagartos Punctated: Lagartos Variety	11	0.10%
	Laguna Verde Incised: Laguna Verde Variety	10	0.09%
	Laguna Verde Incised: Grooved Variety	1	0.01%
	Sierra Red: Sierra Variety	2797	24.38%
	Sierra Red: Sierra Gadrooned Variety	15	0.03%
	Society Hall: Society Hall Variety	657	5.70%
	Society Hall: Society Hall Impressed	1	0.01%
	Union Appliqué: Unspecified Variety	7	0.06%
	Hillbank Red: Hillbank Variety	448	3.91%
	TOTAL	**3947**	**34.29%**
Striated Ware			
Uaxactun Unslipped	Sapote Striated: Unspecified Variety	404	3.52%
	Monkey Falls Striated: Monkey Falls Variety	4232	36.90%
	Monkey Falls Striated: Unspecified (Brown) Variety	17	0.15%
	TOTAL	**4753**	**40.57%**
Orange Ware			
Fort George Orange	Chicago Orange: Chucun Variety	2677	23.33%
Holmul Orange	Aguacate Orange: Aguacate Variety	26	0.23%
	TOTAL	**2703**	**23.56%**
Red-on-Orange Ware			
	Unnamed Usulutan: Unnamed Red-On-Orange	5	0.04%
	Guacamallo Red-On-Orange: Guacamallo Variety	21	0.18%
	Ixcanrio Orange Polychrome: Ixcanrio Variety	75	0.65%
	TOTAL	**101**	**0.87%**

Table 5.33 (Continuation). Statistical Representation of the Wares of the Late Facet of the K'atabche'kax Ceramic Complex

WARES	Types	Number of Sherds	Representation of the Ware in the K'atabche'kax Ceramic Complex
Orange-on-Cream Ware			
	Unnamed Orange-on-Cream	29	0.25%
Cream Ware			
Paso Caballo Waxy Ware	Flor Cream: Unspecified Variety	39	0.34%
Black Ware			
Paso Caballo Waxy Ware	Polvero Black: Unspecified Variety	1	1.01%
	TOTAL	**11,473**	**100%**

monochrome pottery of the Terminal Facet is dominated by the Sierra Group (30.38%). Red slips (10R 5/8; 10R 5/6; 10R 4/8; 10R 4/6) were used for the vessels of this group. Within Paso Caballo Waxy Ware is Sierra Red: Sierra Variety, Society Hall: Society Hall Variety, Society Hall: Society Hall Impressed Variety, Laguna Verde Incised: Laguna Verde Variety, Laguna Verde Incised: Grooved Variety, Lagartos Punctated: Lagartos Variety, Union Appliqué: Unspecified Variety (Table 5.32). Another relevant red monochrome is the type Hillbank Red: Hillbank Variety (3.91%). The type Society Hall with its Impressed Variety still preserves the red (2.5YR 5/6) slip color to produce streaky horizontal variations.

The Flor Ceramic Group represents only .34% of the Terminal Facet. It is characterized by a thin white (5YR 8/1) waxy slip. Black (2.5YR 2.5/0) slipped ceramics of Polvero Ceramic Group make up 1.01% of monochrome pottery. In comparison with the Late Facet (5.04%), striated wares are the dominant ware (36.90%) of the Terminal Facet. There are still three types of Uaxactun Unslipped Wares: Monkey Falls Striated: Monkey Falls and Unspecified (Brown) Varieties, and Sapote Striated: Unspecified Variety.

At K'axob, dichrome pottery is represented by the Unnamed Usulutan Group: Unnamed Red-on-Orange and Unnamed Orange-on-Cream that are closely related to Usulutan traditions. The color combinations in the Usulutan type involve either a red-on-orange or a black on red-orange slip (Gifford 1976:126). Just before the top color dried an instrument helped to wipe off the red color that produced the swirls or vertical and horizontal multiple parallel lines (Gifford 1976:126).

The decoration of the vessels from this period includes appliqués, gadrooning, impressing, incising, modeling and punctation. Grooving and incising are important decorative modes for altering the surface. Incising predominates more than grooving, especially in Laguna Verde Incised: Grooved Variety, Sierra Red: Sierra Variety. Incising is based on line design, and preslip incised circumferential lines tend to occur on the exterior part of the flaring rim or flange. Incising is very common on dishes, flared or outcurved bowls or vases with outcurved sides. Punctation occurs near the neck juncture of Lagartos Punctated: Lagartos Variety type. Appliqués are commonly used to form a braided fillet, adorned by punctations in the Union Appliqué: Unspecified Variety type. Striation is restricted to jars of Monkey Falls Striated: Monkey Falls and Unspecified (Brown) Varieties, and Sapote Striated: Unspecified Variety types.

One of the latest orange monochrome wares is the Aguacate Group. A red (2.5YR 4/6) dull slip, that tends to crackle and can be easily scratched off, is characteristic of Aguacate Group. With Guacamallo Red-on-Orange: Guacamallo Variety and Ixcanrio Orange-Polychrome: Ixcanrio Variety, the polychrome tradition of the Early Classic marks its beginning. Guacamallo Red-on-Orange: Guacamallo Variety and Ixcanrio Orange-Polychrome: Ixcanrio Variety have a reddish yellow slip (5YR 5/6), covering the surfaces of these vessels. The slip is lustrous or glossy, with an occasional suggestion of waxiness. The reddish yellow slip (5YR 5/6) acted as a base to red bands or broad lines, encircling the vessels of Guacamallo Red-on-Orange: Guacamallo Variety. The same base color bears geometric designs on the exterior vessels of Ixcanrio Orange Polychrome: Ixcanrio Variety. The designs were painted with a light reddish brown color (2.5YR

6/4). This type is also decorated by one or several circumferential painted lines. The decoration on this type is usually zoned. The predominant colors are red and black-on-orange.

C.- *The forms of the Late Facet of the Terminal K'atabche'kax Ceramic Complex*

New forms appeared during the K'atabche'kax Terminal Facet (Table 5.34). The jar form has an increased neck diameter; although the short outcurved neck with a direct rim and rounded lip is still present in the assemblage of Chicago Orange: Chucun Variety, Monkey Falls Striated: Monkey Falls Variety and Sapote Striated Unspecified Variety. Jars with vertical necks are very characteristic of Sierra Red: Sierra Variety and Lagartos Punctated: Lagartos Variety.

The bowl form changes for the Terminal Facet. Bowls with outcurved sides everted rim and rounded lip continued to be made; however, the potter has added a medial flange to the vessel. The presence of this flange in the Sierra Red: Sierra Variety flared bowls follows the ceramic modes of Floral Park tradition. Another common form is a rounded bowl with a direct rim, rounded lip, and an incurved base. The bowls of Sierra Red: Sierra Variety type are fairly standardized in height, averaging 9 cm. The bases of bowl, plate and vase forms are generally flat and slipped. Vessel spouts and handles appear, mainly on the jar form. The plate form has flared sides with a flaring rim with a slightly squared lip. Diameter for these vessels varies from 14 to 16 cm. A bowl with flared sides is very common of Laguna Verde Incised: Laguna Verde Variety, Laguna Verde Incised: Grooved Variety.

The forms of Society Hall: Society Hall Variety are restricted to a bowl with vertical sides. Most vessels of Society Hall Variety increased in size, especially, the diameter. A bowl with outcurved sides, an outflared everted rim with a rounded lip, and a flat base is the most common form. The flared bowl is the most common form for Flor Cream: Unspecified Variety, Unnamed Orange-on-Cream, Unnamed Usulutan Group: Unnamed Red-on-Orange, Polvero Black: Unspecified

Table 5.34. Forms of the Terminal Facet of the K'atabche'kax Ceramic Complex

Operation VII (Structure 98)			
Type	Bowls	Jars	Total
Polvero Black: Unspecified Variety	1		1
Monkey Falls Striated: Monkey Falls Unspecified (Brown) Variety		36	36
Monkey Falls Striated: Monkey Falls Variety		1	1
Sierra Red: Sierra Variety	13	14	27
Aguacate Orange: Aguacate Variety	2		2
Ixcanrio Orange Polychrome: Ixcanrio Variety	26		26
Guacamallo Red-on-Orange: Guacamallo Variety	13		13
Flor Cream: Unspecified Variety	3		3
Unnamed Orange-on-Cream	17	2	19
Sapote Striated: Unspecified Variety		11	11
Society Hall: Society Hall Variety	1		1
TOTAL	**76**	**64**	**140**
TOTAL	**54.28%**	**45.71%**	**100%**

Operation VIII (Structure 102)			
Type	Bowls	Jars	Total
Monkey Falls Striated: Monkey Falls Unspecified (Brown) Variety		1	1
Ixcanrio Orange Polychrome: Ixcanrio Variety	2		2
Chicago Orange: Chucun Variety	1	3	4
Sierra Red: Sierra Variety	91	28	119
Society Hall: Society Hall Variety	1		1
Monkey Falls Striated: Monkey Falls Variety		1	1
TOTAL	**95**	**33**	**128**
TOTAL	**74.21%**	**25.78%**	**100%**

Table 5.34 (Continuation). Forms of the Terminal Facet of the K'atabche'kax Ceramic Complex

Operation X (Structures 32-35 and 94)			
Type	Bowls	Jars	Total
Sierra Red: Gadrooned Variety	1		1
Monkey Falls Striated: Monkey Falls Unspecified (Brown) Variety		35	35
Guacamallo Red-on-Orange: Guacamallo Variety	6		6
Chicago Orange: Chucun Variety	16	8	24
Sierra Red: Sierra Variety	341	90	431
Society Hall: Society Hall Variety	46		46
Monkey Falls Striated: Monkey Falls Variety		24	24
TOTAL	**410**	**157**	**567**
TOTAL	**72.31%**	**27.69%**	**100%**

Operation XI (Structure 27)			
Type	Bowls	Jars	Total
Sapote Striated: Unspecified Variety		1	1
Union Appliqué: Unspecified Variety		1	1
Guacamallo Red-on-Orange: Guacamallo Variety	1		
Ixcanrio Orange Polychrome: Ixcanrio Variety	1		
TOTAL	**2**	**2**	**4**
TOTAL	**50%**	**50%**	**100%**

Variety, Repollo Impressed: Variety Unspecified and Union Appliqué: Unspecified Variety types.

The common form for Aguacate Orange: Aguacate Variety is a dish with round sides, direct rim and rounded lip, although sometimes the rim can be exterior-thickened. The diameter for these vessels ranges from 40 to 46 cm. The base is rounded. A characteristic of this Terminal Facet is the appearance of mammiform tetrapods with a basal flange. Tetrapod supports include hollow hemispherical mammiform feet or solid nubbin feet. A basal flange occurs also in Sierra Red.

Dishes and bowls are associated with Guacamallo Red-on-Orange: Guacamallo Variety. Bowls and dishes have flared sides, direct rim, and rounded lip, or an everted rim with rounded lip. These forms have an estimated diameter ranging from 32 to 38 cm. The feet are hollow rattle mammiform with a flat nubbin base. Ixcanrio Orange-Polychrome: Ixcanrio Variety includes tetrapod dishes and bowls with flared sides and a basal flange that is decorated with various polychrome motifs.

VIII.- DIAGNOSTIC CERAMIC CHARACTERISTICS OF THE NOHALKAX CERAMIC COMPLEX

A.- *General Characteristics of the Nohalkax Ceramic Complex*

The ceramics of the Nohalkax Ceramic Complex were found in Operation VII, VIII and XII (Table 5.35). Although there are continuities with the Terminal Facet of the K'atabche'kax Ceramic Complex, dominant red slipped surfaces of earlier facets change to orange slips and to polychrome painting. The ceramic fragments and whole vessels of the Nohalkax Ceramic Complex were classified into nine types. The fragments correspond to the types and varieties listed in Table 5.36. Only whole vessels were found for Actuncan Orange Polychrome: Actuncan Variety, Dos Arroyos Orange Polychrome: Variety Unspecified, and Yaloche Cream Polychrome: Unspecified Variety. Evidence indicates that Aguila Orange: Aguila Variety is statistically dominant during this complex, followed by Balanza Black: Unspecified Variety and Santa Teresa Incised: Santa Teresa Variety while the rest of the types occur in a minor proportion (Table 5.36). Typologically, the Nohalkax ceramics fall within the established classification of central Peten.

Table 5.35. Provenience and Number of sherds of the Nohalkax Ceramic Complex

Operation VII (Structure 98)	Operation VIII (Structure 102)	Operation XIII (Structure 93)	**Total**
771	16	295	**1082**
71.26%	1.48%	27.26%	**100%**

As I previously suggested in Chapter 2, ceramics from the Late and Terminal Formative were found in Nohalkax contexts. The transition to the Early Classic seems to be gradual rather than abrupt. The Sierra Group and the striated wares are present in Nohalkax contexts. It should be clear that the data for this period will change with the results of the 1995 field season, specifically the frequency of the material. I hesitated to include in the Nohalkax Ceramic Complex the Late and Terminal Formative types that continue into the Early Classic times. Several reasons support my decision. The main one, however, was that Early Classic deposits underlying Late Classic deposits were scarce at the time that I classified the Foramtive ceramics. The 1995 field season concentrated the excavations in Classic and Postclassic deposits yielding more information on Early Classic deposits. Results from the 1995 field season will refine the establishment of the Nohalkax Ceramic Complex.

B.- *Wares of the Nohalkax Ceramic Complex*

The Nohalkax Ceramic Complex is characterized by a reorientation of types and modes (Table 5.37). The paste of Actuncan Orange Polychrome: Actuncan Variety is fine and probably contains ash, due to its compactness. As a general characteristic of this period all the pastes for the various types and varieties have a fine texture.

The preferred decorative technique was the use of monochrome slipping, except that waxy monochrome pottery of the Preclassic complex was replaced by a gloss ware tradition that changed in color from red (red 10R 5/8) to orange (red 2.5YR 5/8). The use of gloss finish gives

Table 5.36 Types and Varieties of the Nohal'kax Ceramic Complex.

Types and Varieties	Total Number of Sherds	Percentage of Total Number of sherds	Percentage of Total in Operation VII (Structure 98)	Percentage of Total in Operation VIII (Structure 102)	Percentage of Total in Operation XIII) Structure 93
Aguila Orange: Aguila Variety	1040	96.12	96.76	0.00	99.66
Balanza Black: Unspecified Variety	14	1.29	1.69	6.25	0.00
Lucha Incised: Unspecified Variety	1	1.09	0.13	0.00	0.00
Pita Incised: Unspecified Variety	8	0.74	0.91	0.00	0.34
San Martin Brown: San Martin Variety	4	0.37	0.52	0.00	0.00
Santa Teresa Incised: Santa Teresa Variety	15	1.39	0.00	93.75	0.00
Total	**1082**	**100%**	**100%**	**100%**	**100%**

the impression that a varnish was applied to the surfaces. The slip is thin but harder and very lustrous. Orange gloss is most abundant during this period. Orange slips were used for the dishes, bowls and jars of the Peten Gloss Ware. Included in this ware is Actuncan Orange Polychrome: Actuncan Variety, Aguila Orange: Aguila Variety, Pita Incised: Unspecified Variety, Balanza Black: Unspecified Variety, Lucha Incised: Unspecified Variety and Santa Teresa Incised: Santa Teresa Variety. A total of 1143 sherds, representing 96.47% of the entire complex were orange slipped.

Table 5.37. Wares of the Nohalkax Ceramic Complex

WARES	Types	Number of Sherds	Representation of the ware in the Nohalkax Ceramic Complex
Red Ware			
Peten Gloss	Santa Teresa Incised: Santa Teresa Variety	15	1.39%
Orange Ware			
Peten Gloss	Aguila Orange: Aguila Variety	1040	96.12%
	Lucha Incised: Unspecified Variety	103	0.35%
	TOTAL	**1143**	**96.47%**
Black Ware			
Peten Gloss	Balanza Black: Unspecified Variety	14	1.29%
Peten Gloss	Lucha Incised Unspecified Variety	1	0.09%
Brown Ware			
Playa Dull	San Martin Variegated Brown: San Martin Variety	4	0.37%
	TOTAL	**1082**	**100%**

Monochromes bearing black (1.138%) or variegated base colors (0.37%) also occur, but are clearly dominated by the orange slipped pottery. Particularly noticeable is the presence of black (7.5YR 2/0) slipped pottery of Balanza Ceramic Group. A glossy brownish yellow slip (10YR 7/4) color occurs in the San Martin Group. The vast majority of slipped pottery belongs to the Aguila Orange Group, but specifically to its type Aguila Orange: Aguila Variety. The surfaces of dishes and bowls are covered with a glossy red (red 2.5YR 5/8), thick, strong slip.

Although the Nohalkax Complex is generally a monochrome period, dichrome decoration also occurs on the Actuncan Orange Polychrome: Actuncan Variety type, for which only complete vessels were found. Designs include the Kan Cross, the water shell motif, and an undulating serpent. Feet are sometimes modeled to form an animal feature, as the peccary heads of one Actuncan Orange Polychrome: Actuncan Variety vessel. Other forms of decoration include incising, which consists of simple circumferential lines or geometric forms, as in the Pita Incised: Unspecified Variety type.

C.- *Forms of the Nohalkax Ceramic Complex.*

The predominant major forms during the Nohalkax Complex are bowls, dishes and jars; nevertheless the dish is the most abundant form (89.63%). The principle forms are dishes with flared or outcurved sides in most vessels of this period. The rim is direct with a rounded lip. Size diameters diminish during the Nohalkax Ceramic Complex, varying between 17 to 26 cm. The ring base appears for the first time in this complex (Table 5.38).

Table 5.38 Forms of the Nohalkax Ceramic Complex.

Structure 98				
Type	Dishes	Bowls	Jars	Total
Aguila Orange: Aguila Variety	320	5	23	343
Balanza Black: Unspecified Variety		4		4
Lucha Incised Unspecified Variety		1		1
Pita Incised: Unspecified Variety		2		2
Santa Teresa Incised: Santa Teresa Variety		7		7
TOTAL	**320**	**14**	**23**	**357**
TOTAL	**89.63%**	**3.92%**	**6.44%**	**100%**

The main form of Actuncan Orange Polychrome: Actuncan Variety is a dish with flared sides and a basal flange. It has a direct rim with a rounded lip. Dishes form with flared sides and a basal flange have a direct rim with a rounded lip and a ring base. Diameter is generally 32 cm. Tetrapod bowls present hollow conical feet. Bowls with slightly incurved sides and restricted orifice have a direct rim and rounded lip. Bowls with outcurved sides and a basal flange present a direct rim with rounded lip, and a ring base with a slightly rounded base. Bowls with rounded sides and a ring base have a direct and rounded lip. Average diameter of the vessel is 18 cm and its height 9.2 cm.

The Aguila Orange: Aguila Variety type is dominated by the dish form. Dishes with flared sides have a direct rim with a rounded lip, and a diameter ranging from 17 to 19 cm. The height of the vessel varies from 5.5 to 7 cm, and in some examples is almost 13 cm. Dishes with flared sides and exterior folded rim are 21 cm in diameter. Most walls have a thickness that ranges from .8 to 1 cm. The bases are flat and measure 14 cm in diameter and sometimes are slightly incurved. The bowl form has incurved sides with outflared-everted rim and a rounded lip, measuring 18 cm in diameter. The jar with a vertical neck presents a direct rim and rounded lip and a ring base. Jar height is 13 cm and a diameter of 9 cm. The neck height is approximately 3.5 cm.

During the Early Classic, the most abundant form is a dish with flared sides, a direct rim with a rounded lip. The form is characteristic of Dos Arroyos Orange Polychrome, Balanza Black: Unspecified Variety, Pita Incised: Unspecified Variety, and Lucha Incised: Unspecified Variety. Dishes with flared sides present a Z-angle that is a distinguishable ceramic attribute of Early Classic times. Bowls with incurved-recurved sides and a collared neck are common for San Martin Variegated Brown: San Martin Variety. Bowls with flared sides, a direct rim and rounded lip occur in the Santa Teresa Incised: Santa Teresa Variety. The only identified form for the Yaloche Cream Polychrome: Unspecified Variety is a bowl with incurved sides, a direct rim and rounded lip and a flat base.

In summary, the complexes are parallel to those previously defined in the Maya Lowlands. Additionally, there are ceramic types and varieties that seem to be regional to northern Belize and that are present at K'axob. The characteristics of each ceramic complex, therefore, support the establishment of the sequence. I have not forced the K'axob data into types and varieties already established at other sites; my conclusions are based on continuities detected from one complex from another. The introduction of new ceramic traditions, however, helps to distinguish one complex from the other. New ceramic traditions are rooted in an established ceramic complex but anticipate new modes for a later complex. In this section, I will compare the K'axob Ceramic Complexes with other established Maya ceramic sequences and make the ccase that the K'axob ceramic sequence conforms to pottery development in the Maya area.

A.- The Chaakkax Ceramic Complex

1. The Early Facet of the Chaakkax Ceramic Complex. The earliest pottery excavated at K'axob corresponds to the Early Facet of the Chaakkax Ceramic Complex. The nature of this Early Facet relates to the Xe ceramic sphere (Adams 1971), to the Real Ceramic Complex at Seibal (Sabloff 1975), and to the Jenney Creek Ceramic Complex at Barton Ramie (Gifford 1976). In the Early Facet, there is definitely a pre-Mamom component, characterized by the presence of Xe and Real types such as Abelino Red: Abelino Variety and Toribio Red-on-Cream: Toribio Variety. The presence of Mamom types or varieties, such as Joventud Red: Unspecified Variety, Guitara Incised: Guitara Variety, Chunhinta Black: Unspecified Variety, and Pital Cream: Pital Variety, confirm contacts with the Peten-Pasion regions. The identification of Chicago Orange: Chucun Variety reflects the participation of K'axob in the development of a local ceramic tradition. The Early Facet of the Chaakkax Ceramic Complex, therefore, represents a mixture of Xe and Mamom ceramics with local ceramic expressions. Sites such as Barton Ramie (Gifford 1976), Kichpanha (Reese and Valdez 1987), and Colha (Valdez 1987) share a similar ceramic complex.

The Early Facet cannot be considered as a Xe or Real complex. Most Xe and Real types, such as Crisanto Black: Crisanto Variety, Huetche White: Huetche Variety, Chompipi Incised: Chompipi Variety, and Baldizon Impressed: Baldizon Variety are absent in the K'axob ceramic assemblage. The white slipped monochrome pottery of the Xe and Real complexes is completely absent at K'axob. The absence of a stronger Xe and Real ceramic component is the main reason why I could not place the Early Facet of the Chaakkax Ceramic Complex entirely within the Xe sphere. K'axob pottery relates more to the later waxy ware than to the duller quality of the Xe-Real slips. In this regard, the Early Facet of the Chaakkax Ceramic Complex is similar to the Jenney Creek Ceramic Complex at Barton Ramie (Gifford 1976), which also has a stronger Mamom component. The presence of Tierra Mojada Resist: Tierra Mojada Variety and Timax Incised: Timax Variety at the site of K'axob confirms the strong influx of ceramic traditions coming from El Salvador into northern Belize through the Guatemala Highlands.

B. The Late Facet of the Chaakkax Ceramic Complex. The Late Facet of the Chaakkax Ceramic Complex corresponds to Mamom traditions; however, there are significant ceramic changes occurring in northern Belize. First, Xe types are being replaced by Mamom ceramics. This phenomenon extended to other sites in northern Belize. At Colha and Kichpanha, there is a gradual replacement of the Consejo Group and the Copetilla Unslipped type by the Joventud group and Richardson Peak Unslipped type during the Early Facet of the Chiwa Ceramic Complex (Valdez 1987; Reese and Valdez 1987). While this happened, the Chicago Group becomes a major monochrome type in the K'axob ceramic assemblage.

Second, the number of types and varieties diminished in frequency in comparison with the earlier facet of the Chaakkax Ceramic Complex. Chicago Orange, Muxanal Red on Cream and Joventud Red dominate the ceramic complexes in northern Belize. Kosakowsky (1987b) identified the same Mamom types at Cuello. At Kichpanha, the Late Facet of the Chiwa Ceramic Complex is characterized, mainly, by Joventud Red and Richardson Peak Unslipped (Reese and Valdez 1987:39). More types and varieties represent this facet at Colha, in comparison to other sites (see Valdez 1987). A similar situation is occurring at El Mirador during the Monos Ceramic Complex

(Forsyth 1989). The monochrome reds of Joventud dominate in frequency over the monochrome blacks (Chunhinta Black), and cream types. At the site of Becan, in the Acachen Ceramic Complex, three slipped wares prevail in the sequence: the monochrome Red Joventud, the Black Chunhinta, and the dichrome Muxanal Red on Cream (Ball 1977a). At K'axob, the slipped wares of the Late Facet correspond to Chicago Orange: Chucun Variety, Joventud Red: Unspecified Variety, Guitara Incised: Guitara Variety and Muxanal Red on Cream: Unspecified Variety.

The third phenomenon relates to the establishment of more independent ceramic lines in the Belize Valley (see Gifford 1976). Northern Belize seems to increase the production of its own ceramics, such as the Chicago Orange type. The distribution of which is restricted to this area. Possibly, the Muxanal Red group was locally made in northern Belize, as its distribution has a broader expansion in the northern part of Belize up to Becan (see Valdez 1987; Kosakowsky 1987a, 1987b; Reese and Valdez 1987; Ball 1977a). There is a strong development of the Muxanal group and Savana Orange at Becan (Ball 1977a:151). In contrast, the Muxanal Red group appears in minor quantities at sites such as Altar (Adams 1971), Uaxactun (Smith and Gifford 1966), Lake Yaxha-Sacnab (Rice 1979:22) or El Mirador (Forsyth 1989:125).

At K'axob, flat bottomed flaring-walled vessels with wide everted rims and tecomates are important forms for Middle Formative times (Adams 1971; Forsyth 1989; Valdez 1987; Reese and Valdez 1987). At Altar de Sacrificios, monochrome and unslipped pottery types predominate during the San Felix Mamom Ceramic Complex. Red and white are favored as slip colors, with great standardization of color, form and decorative techniques (Adams 1971:4). Red is a preferred color on plates and necked jar shapes (Adams 1971:4). The Chaakkax Ceramic Complex shares the monochrome ceramic tradition, but not the dominating types of the unslipped pottery such as Joventud Red: Mocho Variety of the Early Facet of the San Felix Ceramic Complex. Red slips were used for most dishes, bowls, tecomates and jars of the Chaakkax Ceramic Complex. At Becan, for example, Joventud Red slip tends to be brighter, flatter, and flakier than those of the Late Facet contexts (Ball 1977a). The latter tend to possess deeper, more polished slips related to Pakluum Sierra Red (Ball 1977a:128). At K'axob, Joventud Red slip tends to crackle, like the Sierra Group.

At Altar de Sacrificios there is a total absence of the striated technique (Adams 1971:85). The absence of striated wares characterizes the Chaakkax Ceramic Complex. Chamfering is present in both the Joventud and Muxanal groups at K'axob. This technique occurs in low frequency at Becan (Ball 1977a:128) when compared to Uaxactun (Ball 1977a:151). At K'axob and El Mirador (Forsyth 1989:125), incising is more common than chamfering. The incised circumferential line near the rim is a diagnostic for the Monos (Forsyth 1989:125) and the Chaakkax Ceramic Complex. Technologically and stylistically, the Chaakkax Ceramic Complex is more closely related to types in northern Belize and the Pasion-Peten regions than it is to ceramic traditions in El Salvador and the Guatemala Highlands.

B.- The K'atabche'kax Ceramic Complex

1. The Early Facet of the K'atabche'kax Ceramic Complex. The Early Facet of the K'atabche'kax Ceramic Complex corresponds to a transitional stage between the Mamom and the Chicanel ceramic spheres. Ceramic orientation at K'axob is similar to the Peten. The Mamom ceramic tradition includes types such as Joventud Red: Unspecified Variety, Guitara Incised: Guitara Variety, Muxanal Red on Cream: Unspecified Variety and Chicago Orange: Chucun Variety. Mamom types, however, coexist with Chicanel pottery such as Matamore Dichrome: Matamore Variety and Sierra Red: Sierra Variety. Having a transitional Facet with Mamom and Chicanel types is not uncommon for northern Belize. Sites like Kichpanha (Reese and Valdez 1987:39) and Colha (Valdez 1987:238) follow this pattern during the Late Facet of the Chiwa Ceramic Complex. Dixon (1959:45), furthermore, documented this transitional stage in Chiapa de Corzo. The ceramics found in Pit 38 (750-400 B.C.) have strong similarities with the Mamom and Chicanel pottery of Uaxactun (Dixon 1959:45).

Mamom types and varieties were used for various domestic activities at K'axob, as these types appeared in sherd-lined pits or as part of the discarded material in midden deposits. Until the Late Facet of the Chaakkax Ceramic Complex, Sierra Red was used for ritual activities. From this

facet onwards, the Sierra Group slowly replaced the Joventud Group. At K'axob, the identification of Joventud Red: Jolote Variety supports this idea. The Jolote Variety is one of the latest varieties within the Joventud Group (Ball 1977a). The variety continued into the Late Facet of the K'atabche'kax Ceramic Complex and disappeared completely for the Terminal Facet.

The Early Facet sees dramatic changes in the ceramic assemblage. First, the tecomate form totally disappeared during the Early Facet. One of the reasons for its disappearance could be the increasing use of the jar form, associated with striated wares. The occurrence of striated wares is a Chicanel ceramic tradition rather than a Mamom phenomenon. In the Peten and adjoining regions, striated ceramics tend to occur somewhat later than unslipped plain pottery, and considerably earlier than in northern Belize (Hansen and Forsyth 1987:441). At Cuello, for example, striated jars occur late in the Cocos-Chicanel Horizon (Pring 1977a:65; Kosakowsky 1983:267). At K'axob, striated wares were introduced during this Early Facet. Second, there is an absence of Xe types in the ceramic assemblage. A permanence of Xe modes, however, is present in the ceramic assemblage of this Early Facet, especially in the decoration of the Sierra Red: Unspecified Variety and the Guitara Incised: Pollo Desnudo Variety. Third, the characteristic chamfering decoration of the Muxanal Red-on-cream: Unspecified Variety is not present anymore during this Early Facet.

Several important modes relate to the emergence of the Chicanel sphere, such as the circular line of connected arcs or bouncing lines. The decoration can be appreciated on the vessels of the Sierra Group. In the K'axob ceramic assemblage, new ceramic types are introduced, for example Black Rock Red. Gifford (1976:79) suggested that Black Rock Red may be a very late Jenney Creek manifestation, but also a previous ancestor of the later Hillbank Red type. Society Hall was introduced also in this Early Facet. Modeled effigy pots are characteristic of this Facet. The duck effigy vessel, found in Burial 10 of Operation XI, is similar to those found in the Pinos Black-brown Ceramic Group of the Chul Ceramic Complex (400-100 B.C.) in Western El Salvador (Demarest 1986:Figure 48); and in the Polvero Ceramic Group of Cuello (Kosakowsky 1987a:77, Figure 6.24a).

2. The Late Facet of the K'atabche'kax Ceramic Complex. The Late Facet of the K'atabche'kax Ceramic Complex corresponds to the widespread Chicanel ceramic traditions. Typological uniformity, present among even widely separated member complexes of this sphere, suggest extensive inter-regional contacts at an intensive level (Ball 1977b:122). Quite possibly, ceramic uniformity is due, in part, to the growth of trade in the Maya region. Interaction between the southern Maya area and the Maya lowlands increased, as suggested by the dispersal of highland products such as jade and similar green stones, obsidian, feathers, and other items. K'axob is no exception to this widespread regionalization. The Late Facet includes types found in Belize, the Peten, and the Southern Lowlands.

The monochrome pottery of this period is marked by the dominance of the Sierra Group, which is a development from Joventud Red (Gifford 1976:111). Sierra Red has a widespread distribution as it has been found at most sites in northern Belize (Reese and Valdez 1987; Valdez 1987; Kosakowsky 1987a), the Peten (Sabloff 1975; Adams 1971; Forsyth 1989) and the Yucatan Peninsula (Ball 1978). Sierra Red is absent in the Chul Ceramic Complex of Chalchuapa (see Sharer 1978). Scattered examples recovered in the Salama Valley are further evidence of interaction with areas to the north.

The ceramics from northern Belize, moreover, affiliate strongly with the Barton Ramie pottery tradition (see Valdez 1987; Reese and Valdez 1987). The Mount Hope Ceramic Complex at Barton Ramie, however, does not follow the central Peten traditions. Stann Creek is like Barton Ramie in this respect (Graham 1994). The single typological correspondence between Barton Ramie and the Peten is the Sarteneja Usulutan type (Gifford 1976:126).

Sites in northern Belize seem to share ceramic traditions found at the sites of Altar de Sacrificios (Adams 1971), Uaxactun (Smith and Gifford 1966), and Seibal (Sabloff 1975). The Sierra Group, Flor Cream: Unspecified Variety, Polvero Black: Unspecified Variety, and Sapote Striated: Sapote Variety, for example, are characteristic of the ceramic assemblages of Colha (Valdez 1987), Kichpanha (Reese and Valdez 1987), and K'axob. To a certain extent, the Cascabel Ceramic Complex of El Mirador is similar to K'axob as it is also dominated by Sierra Red, Polvero Black,

and Flor Cream (see Forsyth 1989). A very interesting type appearing at the end of the Late K'atabche'kax is the Hillbank Red type that derived from the earlier Black Rock Red (Gifford 1976). The distribution of this type is restricted to the Belize Valley and northern Belize, as it is totally absent in the Peten. I suspect that Hillbank Red was made in the surroundings of Barton Ramie, because a wider variety of forms occur at this site in comparison with K'axob and other sites in northern Belize (see Valdez 1987; Reese and Valdez 1987).

At K'axob, the abundance of striated vessels represents a change in the ceramic production of this Late Facet. At Cerros (Robertson 1983), Sapote Striated occurs in very small quantities in early Chicanel, but becomes quantitatively important only later in the sequence. Striation is present in the San Felix Ceramic Complex at Altar (Adams 1971), in the Eb Ceramic Complex at Tikal (Culbert 1963), and at Uaxactun in the Mamom Complex (Smith and Gifford 1966). Striated ceramics do not seem to appear in the sequence at Seibal until Chicanel times (Sabloff 1975). Unslipped pottery at K'axob is represented by the Chicago Group. Potters are probably producing Chicago Orange at Operation XI, as suggested by the archaeological findings.

The Late Facet is characterized by an increase in the use of the spouted vessel, the more abundant presence of effigy vessels, and Usulutan types characteristic of El Salvador (see Sharer 1978:210). K'axob is sharing the modeled-effigy vessels and Usulutan ceramics of the Chul Complex of Chalchuapa (Sharer 1978:125-126). Usulutan vessels have been reported at the sites of Cuello (Kosakowsky and Pring 1991), Cerros (Robertson and Freidel 1986); and Colha (Adams and Valdez 1979), Tikal and Seibal (Sabloff 1975), Nohmul (Hammond 1978), and Barton Ramie (Gifford 1976:126). The Usulutan sherds found at K'axob may be minimum in quantity, but their presence is significant to reaffirm the links with these regions, ties that will be more significant in the Terminal Facet of the K'atabche'kax Ceramic Complex.

The K'axob Usulutan ceramics are identical in slip, surface finish, form and appearance to Kaminaljuyu Usulutan ceramics. The sherds found at K'axob are probably of the Olocuitla and Lolotique type (Demarest and Sharer 1982:815). Copies of Usulutan ceramics are present at K"axob and El Mirador. The type at El Mirador, Caramba Red-on-Orange, consists of positive,

multiple wavy or straight lines applied in a red pigment on a red orange background in an attempt to imitate the Usulutan type Usulutan of El Salvador-Honduras region (Forsyth 1989:125).

3. The Terminal Facet of the K'atabche'kax Ceramic Complex. At the end of the Formative period, the widespread cultural uniformity apparently broke down within a relatively short period. Polychrome pottery and Aguacate Orange appeared sometime at the end of the Late Facet of the K'atabche'kax Ceramic Complex. Pring (1977b:142) characterized the Protoclassic as a period having Usulutan decorated pottery associated with tetrapod and mammiform vessels. The Protoclassic period, however, behaves differently at each site and region.

At Kichpanha, Reese and Valdez (1987:41) noticed a lack of Floral Park surface treatments and no examples of Ixcanrio Polychrome, Aguacate Orange, or Usulutan ceramics. New evidence at Kichpanha established the presence of Ixcanrio Orange, but diagnostic Floral Park ceramics are weakly represented at Colha and are linked to ritual funerary contexts (Meskill 1992:112). At Becan, for example, no true Protoclassic ceramic complex occurs, although Usulutan-like types and mammiform-footed, polychrome tetrapods do occur as minor components during the Terminal Facet of the Pakluum Phase, indicating contact with areas experiencing a fuller manifestation (Ball 1972:35). Specific types associated with the Floral Park subcomplex, such as Gavilan Red on Orange and Ixcanrio Orange Polychrome, have no antecedents in Western El Salvador or elsewhere in the Guatemala Highlands. Sherds of the Floral Park ceramic complex of Belize, including an Ixcanrio Orange Polychrome dish with distinctive paste similar to examples at Barton Ramie, were identified in strata underlying a typical Ulua Valley component with early polychromes at a site on the Chamelecon River (Joyce 1993:85). During the Horcones Phase at Chiapa de Corzo, there is indication of experimentation with vessel shapes, with decorative techniques, and design motifs. The complex is defined by the presence of tetrapod mammiform bowls with frequent effigy decoration and by stuccoed and Usulutan vessels from El Salvador-Guatemala region (Peterson 1963: 123). The Horcones phase, however, is very similar to the ceramics and ritual offerings of the Terminal K'atabche'kax Facet, except for the characteristic stuccoed decoration (see Peterson 1963).

In Baja Verapaz and Middle Chixoy areas, La Lagunita potters received new tehniques and ideas of foreign groups who have migrated into the Sajcabaja-Canilla zones (Ichon 1987:292). The origin of these new techniques and ideas are Kaminaljuyu and Chalchuapa or perhpas more generally western El Salvador, since the similarities that link Lililla with Late Caynac are numerous and strong (Ichon 1987:292).

The Terminal K'atabche'kax Ceramic Complex is characterized by a continuation of Late Facet K'atabche'kax types such as Sierra Red: Sierra Variety, Society Hall: Society Hall Variety, Hillbank Red: Hillbank Variety, and Monkey Falls Striated: Monkey Falls Variety. At K'axob, the ceramics indicate changes in the paste and slip color, some of which presage the Early Classic traditions. In addition there is a notable presence of bichrome and polychrome pottery, represented by Guacamallo Red-on-Orange, Ixcanrio Red-on-Orange, and Usulutan ceramics. During the Terminal Facet, pseudo-Usulutan ceramics are part of the sample. Regarding forms, there is a considerable representation of basal flanges and abundant presence of tetrapod mammiform vessels. The basal flange, however, occurs on Sierra Red vessels that could be considered Late Formative. The occurrence of these Protoclassic modes with Late Formative traditions suggests contemporaneity.

At K'axob, the "Protoclassic" is an addition to the Late Formative. The continuation of Late Formative ceramics into the Protoclassic period is not exclusive to K'axob. Many of the presumed Protoclassic types and modes originated in the Late Preclassic complex at Cerros (Robertson and Freidel 1980). At Tikal the ceramic assemblage is very similar to that at K'axob and Cerros. The new influences that appeared in the ceramic traditions of Tikal show much continuity with earlier Preclassic styles and some relationship to pottery of the Holmul I and Floral Park phases of the eastern sector of the Maya Lowlands (Culbert 1963:7). Almost all vessel forms at Tikal associate with Holmul I; however, Ixcanrio polychrome, typical of the eastern region, is absent in the ceramic assemblage (Culbert 1963:7). At Seibal, there is no evidence of a separate subcomplex, as the Salinas Complex at Altar, or Floral Park at Barton Ramie (Sabloff 1975:231).

Early Classic Period Maya pottery appears to be relatively uniform from Piedras Negras in the west, through Uaxactun and Tikal in the central Peten, to Barton Ramie in British Honduras in the east (Gifford 1976:154). At Kichpanha, Early Classic ceramics are viewed as a hiatus in the ceramic sequence; although this does not preclude occupation of the site during this period (Reese and Valdez 1987:41). At Barton Ramie, the Early Classic indicates strong integration with Peten ceramic traditions (Gifford 1976:154). Seibal ceramic material shows close typological similarities to Uaxactun and Altar de Sacrificios (Sabloff 1975:233).

At Colha (Valdez 1987:246) and Altar de Sacrificios (Adams 1971), the ceramics of the Early Classic derived from traditions of the Terminal Preclassic. At K'axob, the Late and Terminal ceramic traditions continue into Early Classic times. Results of the Early Classic ceramics are preliminary. K'axob pottery, however, pertains to the Tzakol sphere. Forms such as the round side polychrome bowls occurring at Uaxactun (Smith 1955:7) are present in the ceramic sample. The polychrome basal flange bowls, distributed as far as Copan, are significant in the ceramic collection. The ring base replaces the mammiform feet of the Terminal Facet. Curiously, the incising technique fades in the Early Classic, in favor of plain slip pottery or polychrome painting. Ceramic data indicate that K'axob was affiliated with the Early Classic Ceramic traditions of the Peten, as the types Aguila Orange, Actuncan Orange, Balanza Black and Triunfo Striated are present in the ceramic assemblage. Early Classic ceramics, therefore, are part of widespread Tzakol sphere.

Chapter VI: Conclusions

INTERPRETATION AND RESULTS OF THE K'AXOB TYPE:VARIETY ANALYSIS

The K'axob ceramic study reviewed ceramic analysis in northern Belize and discussed the implications of the Cuello shortened chronology to ceramic classification. The research climate in northern Belize proved to be a challenge for the K'axob ceramic study. Regardless of the encountered problems, the type:variety system facilitated the description of the ceramics and provided a chronological framework for K'axob. I believe the K'axob ceramic analysis has traced a new path in reconstructing the cultural history of K'axob. Throughout this chapter, I address the need to evaluate the Cuello ceramic sequence, as this will provide a strong comparative framework for analyzing cultural development in northern Belize. With this interpretation, I will confirm the broad ideological participation of K'axob in Maya cultural development.

I.- A PROPOSAL TO THE PREVAILING CUELLO CLASSIFICATION PROBLEMS

As previously stated in the introduction, the chronology and the ceramics for the site of Cuello were debated extensively in the literature. As an archaeologist, I had to address and review the existing chronological problems in northern Belize had to be addressed and reviewed during the K'axob ceramic analysis. As a ceramicist working with the type-variety system in the Maya area, I was intrigued by the contradictions that had appeared over the years in the ceramic literature for northern Belize during the reassessment of the Cuello dating. Many problems remained in interpreting ceramic development in northern Belize, even though the Swasey debate ended with the reassessment and the recalibration of the Cuello dating (Andrews V and Hammond 1990; Hammond 1991a, 1991b).

A major problem for ceramic research is the fact that the establishment of the Cuello types and varieties occurred before the reassessment of the Cuello dates. The reassessment brought repercussions for the ceramic data from Cuello because the original dating was fundamental to the establishment of many Swasey and Bladen types (see Pring 1977a; Kosakowsky 1987a). To understand the repercussions, Swasey ceramics in the Middle Formative need further study in northern Belize. My review of ceramic collections for northern Belize indicates that at least the Swasey related types at K'axob share all their attributes which the Xe and Real ceramic material from Altar de Sacrificios and Seibal.

Critical to ceramic research is to define whether the ceramic sequences in northern Belize include types from the Xe and Real ceramic complexes. Cuello ceramics duplicate already existenting types. Ceramicists in northern Belize are already accustomed to using the nomenclature for the Cuello types and varieties. Certainly it will be difficult to change the entire nomenclature. Consequently, I would like to suggest that if ceramicists detect the duplication of types, the new Cuello name should be dropped and the original name should be used. I am already using the original type-variety names. I report, for example, the Cuello type, Consejo Red, as Abelino Red: Abelino Variety. In cases where the Cuello type is really a variety of an existenting type, ceramicists could use, for example, the name Consejo Red as that of the variety of Abelino Red.

A.- The repercussions of the proposal

What will be the repercussions of this procedure? Changing the nomenclature will improve our understanding of the origins of Swasey and Bladen ceramics. The Cuello ceramic classification so far obscures recognition of the distribution of Xe material in northern Belize, and to this extent hinders our understanding of the earliest Lowland Maya contacts with Chiapas and Tabasco. Kosakowsky and Pring (1991:62) believe the origins of Swasey ceramics are obscure with no clear derivation from either the Maya Highland zone to the South or from the Gulf Coast of Mexico to the West. Now that the types do not predate other ceramic traditions, as Marcus (1984:830) suggested, Swasey is a regional variant of Xe and looks like any other Middle Formative complex (Andrews 1990). A revision of the Swasey and Bladen ceramic complexes could probably solve the disagreement and helps

explain what seemed like the lack of ceramic ties and continuities between northern Belize and the rest of the Maya Lowlands for the early Middle Formative. With great certainty, this procedure will represent an improvement in giving some meaning to our inter-site comparisons.

I disagree with Hammond's view that the modal links demonstrated with the Xe sphere by Kosakowsky, or even the few closer type-level parallels, make Bladen separable from Swasey at slightly more than the facet level (Andrews V and Hammond 1990:579). Andrews V and Hammond (1990:572) accept that ceramic changes from Swasey to Bladen are not great. The shortened chronology makes not only the Bladen types but also the Swasey types closer in decoration and forms to the Xe ceramic tradition. As Marcus (1984:830) noted, "Pring himself states (1977:362) that in terms of shape and decorative modes the Altar de Sacrificios Xe ceramics reveal a number of comparable examples to Swasey." Swasey and Bladen ceramics, as a result, are really an early and a late facet of a single ceramic complex as demonstrated also by Andrews V (Andrews V and Hammond 1990:579).

Consequently, I support Andrews V observation that Swasey and Bladen ceramics are not sufficiently different to warrant separation into two complexes (Andrews V and Hammond 1990:579). Ceramic comparisons made by Kosakowsky (1987a) and Pring (1977a) support my observations of a Xe and Real component in Swasey ceramics that continues into the later Bladen ceramics. I am conscious that type comparisons alone cannot corroborate entirely the relation between Swasey and Xe. The archaeological evidence at Cuello, in itself, supports contact and communication with the Peten and the Guatemala Highlands. The origins of Swasey ceramics are to be found in the Xe and Real ceramic traditions, based on the following arguments.

B.- *Tracing the Origins of Swasey Ceramics*

Accepting the Xe and Real component in the ceramic assemblages of Belize is not that simple. Xe ceramics relate to the first farming population in the lowlands (Gifford 1976:61; Willey 1977:400). The ceramic assemblages of these early inhabitants define the Xe occupation at the sites of Altar de Sacrificios and Seibal (Adams 1971; Sabloff 1975). Xe occupation in the Peten is supported at Altar de Sacrificios with a radiocarbon sample (Gx-172) taken from a human bone that yielded a date in the

930-560 B.C. range (Adams 1971:146). The Gx-172 sample is in certain association with Xe ceramics because it was found in a burial. Dating of the Xe complex at Altar de Sacrificios depends heavily on its overlapping correspondence with Dili and Escalera complexes at Chiapa de Corzo (Adams 1971:146).

Unfortunately, as Hammond indicates (1991a:5), there is only one single calibrated radiocarbon date of 850 B.C., to support a Xe occupation. Precise dating of the Early and Middle Formative in the Maya area has been very difficult because of the unreliable nature of radiocarbon dates (see Lowe 1978:367). The origin of most samples from which dates were obtained come from midden deposits that, although stratified, still generate problems (see Clark and Gosser 1993). The context of Formative pottery at Seibal is largely that of refuse deposits excavated beneath the A Group plaza (Willey 1970:320-321). The only radiocarbon date for Seibal was obtained from organic material within one of the five Real Ceramic Complex jars associated with a cache (Sabloff 1975:229).

Quite unfortunately for Maya studies, past archaeological interventions at various sites have provided us with only one reliable radiocarbon date for a specific phase (see Hammond 1991b). Favorably, Cuello is a site with 24 radiocarbon dates, 18 acceptable and correlated with the stratigraphy (Hammond 1991b:55). Cuello is probably the only site in Mesoamerica to provide 71 radiocarbon determinations (Andrews V and Hammond 1990:579). Still, the samples to date Swasey were not at all reliable. Truly, archaeological excavations should provide us with more radiocarbon dates, but also, and whenever possible, corroborate them with other dating methods.

The dating for Xe and Real Ceramic Complexes, however, is consistent with the cultural Mesoamerican background (Lowe 1978). If one accepts the 1200/1000 date proposed by Hammond (Andrews V and Hammond 1990:579), it implies an earlier beginning for the Xe ceramic complex. Consequently, it would be necessary to explain the presence of a Xe ceramic tradition in northern Belize and the Yucatan before the arrival of Xe ceramics in the Peten-Pasion regions. As Andrews V (Andrews V and Hammond 1990:579) suggested, the dating and the historical background of the distribution of Xe ceramics in the Peten and the Rio de la Pasion regions do not support such a date. I agree entirely with Andrews V (Andrews V and Hammond 1990:579) that it is unlikely that Swasey

began before 1000 B.C., based on the available dating, but also, on the characteristics of the Swasey ceramics. Swasey ceramics are now contemporaneous with the Xe and Real ceramic traditions. Even if it is possible that Xe could have an earlier date in the Peten and the Pasion, the Xe and Real component of the Swasey and Bladen ceramics is still a characteristic of these complexes. If Swasey is placed closer to 900 B.C., then chronological disparity disappears between the Xe ceramic tradition in the Peten-Pasion regions and northern Belize, and moreover with major events in Mesoamerica.

1.- The establishment of the Swasey Ceramic Sphere. The existence of a new ceramic sphere for northern Belize remains unclear for various reasons. The earliest ceramic complexes for northern Belize are a mixture of Xe and Mamom types. The characteristics refer to a transitional stage between ceramic spheres. Ceramicists in northern Belize need to review the failure of the type-variety system in dealing with transitional stages and need to agree to establish a ceramic sphere that includes these transitional characteristics.

Without a reassessment of the Cuello typology, one cannot accept the existence of a Swasey ceramic sphere for northern Belize. The Swasey ceramic complex has only been recognized at the site of Cuello. A few Swasey types, so far, were found at Colha (Valdez 1987), Kichpanha (Reese and Valdez 1987), Pulltrouser Swamp (Fry 1989) and K'axob. The definition of the ceramic sphere (Willey, Culbert, and Adams 1967:306-314), therefore, cannot support the establishment of Swasey as a ceramic sphere for northern Belize. Perhaps, the original dating is the only reason why the Swasey ceramic complex was found only at Cuello (Hammond 1991a:7). The presence or absence of Xe ceramics at the site of Cuello, therefore, is significant to integrate this site into ceramic development of northern Belize and to appreciate the existence of a ceramic sphere for this area.

II.- THE DISTRIBUTION OF XE CERAMICS

A.- Arrival of Xe ceramics into the Peten and Rio de la Pasion regions

Xe pottery is well developed technically, so it is considered an intrusion into the Peten (Andrews V 1990:8). Xe ceramics arrive into the Peten-Pasion regions at the time of the San Lorenzo collapse

around 900 B.C. (see Sabloff 1975:230). The collapse, apparently, led the San Lorenzo inhabitants to move to La Venta, while others entered the Maya Lowlands (see Sabloff, 1975:230). The event corresponds to the Xe occupation of Altar de Sacrificios and Seibal (see Adams 1971 and Sabloff 1975), moreover, with the beginning of the Middle Preclassic Period (see Willey 1978:535). The origin of the Xe inhabitants is still a debated issue (see Andrews 1990). Two areas are suggested, a Gulf Coast origin (Adams 1971; Sabloff 1975) and an implicit El Salvador origin by Gifford (1976) and Sharer (1978).

1.- The Gulf Coast Origin. The Rio de la Pasion data implies a Gulf Coast origin based on the long tradition of white slipped pottery made in that area (Sabloff 1975:230). The ceramic assemblages from Altar de Sacrificios and Seibal are Xe-related. Between the Xe and Real Ceramic Complexes, however, there are some significant ceramic differences. The abundance of large bolstered-rim tecomates and the white slipped Huetche Group, for example, is greater at Seibal than Altar de Sacrificios (Sabloff 1975:229). White slipped ceramics from Seibal tend to be softer, duller and more matte-like than their counterpart at Altar de Sacrificios (Willey 1970). The fluted tradition, moreover, is not a significant component of the ceramic assemblage from Altar de Sacrificios (see Adams 1971), as it is in Seibal (Sabloff 1975). The Xe and Real ceramic complexes of Altar (Adams 1971) and Seibal (Sabloff 1975) share the following Xe types: Abelino Red, Achiotes Unslipped, Baldizon Punctated, Chompipi Incised, Crisanto Black, Huetche White, and Pico de Oro Incised. Seibal types, such as Yalmanach Impressed, Edmundo Fluted, and Valdemar Fluted are absent at Altar de Sacrificios. In contrast, Yaltata Orange, Datile Red on Black and Uzbaldo Daub-on-Buff from Altar de Sacrificios (Adams 1971:80) do not occur at Seibal (Sabloff 1975).

The differences in the ceramic assemblages of both sites lead to several interpretations. First, Altar de Sacrificios and Seibal share a limited number of Xe types. Incorporation of Xe pottery into ceramic assemblages of Altar de Sacrificios and Seibal may support an intrusion or a trading argument. Xe pastes at Altar de Sacrificios, however, present closer affinities to an Isthmian source than pastes at Seibal (Andrews V 1990). If a single Xe ceramic tradition intruded into the Peten-Pasion regions, there would not be any differences in the pastes, unless Xe ceramics were made with local sources. The differences, moreover, may imply that populations at Altar de Sacrificios

and Seibal made their own ceramics and that there is a local ceramic development. Unfortunately, petrographic studies are too limited to establish an indigenous development versus a foreign ceramic tradition.

The possibility that Xe ceramics were traded into the Lowlands from the Gulf Coast should be explained. This is a period of major cultural interaction from the Gulf Coast to El Salvador (Lowe 1978), as suggested by the ceramic characteristics dispersed along these areas. The double line break and the bouncing lines, representative of Gulf Coast ceramics, appear on the Pacific Coast, the Highlands of Guatemala, and El Salvador (Andrews V 1990:8). The Colos ceramics (900-600 B.C.) at Chalchuapa are described as having motifs with obvious Olmec affiliation (Sharer 1978:124). Even the earliest known pottery at Chalchuapa is related to the Cuadros Ceramic Complex at Salinas La Blanca, Monte Alto, and Izapa (Sharer 1978:124). The Congo Ceramic Group at Chalchuapa, moreover, has similarities with the cream and white wares of both the Pacific and Gulf Coasts, as with some of the earliest Las Charcas pottery from Kaminaljuyu (Sharer 1978). Evidently, sites in other regions adopted ceramic traditions coming from the Gulf and the Pacific Coasts. It is not surprising that the inhabitants at Altar de Sacrificios or Seibal could trade Xe ceramics or may adopt ideas of how to make and use pottery vessels from the Gulf and Pacific coasts.

2.- El Salvador Origin. Gifford (1976:61) associated the Xe group with the making of the unslipped Jocote Orange Brown pottery from El Salvador. The identity of Jocote Orange Brown, unfortunately, is not clear. Adams (1971:119) reports that Jocote Brown corresponds completely to Achiote Unslipped: Raudal Variety. This observation may affiliate Jocote Orange Brown to Xe ceramics. Sabloff (1975:230), however, is not convinced of an identity between the Jocote Group material at Chalchuapa and Barton Ramie and the Real pottery of Seibal. Even if Achiote Unslipped: Raudal Variety is Jocote Brown, then the identity does not contradict the assumption that ceramic evidence at Barton Ramie cannot support an origin from El Salvador, for the following reasons.

First, if Xe inhabitants arrived from El Salvador, then one would expect to find Xe and Real types at Chalchuapa. Xe and Real types, however, are missing in the ceramic assemblages from both, Chalchuapa and Barton Ramie. Second, it is not possible to associate Jocote Orange Brown with Xe inhabitants because this type is absent at Seibal (Sabloff 1975) and Altar de Sacrificios (Adams 1971). Third, Jocote Orange Brown coexists with Xe and Mamom ceramics at Barton Ramie, in the Jenney Creek Ceramic Complex.

The earliest occupation at Barton Ramie, the Jenney Creek Ceramic Complex, can be considered a mixture of Xe and Mamom types, similar to the Early Facet of the Chaakkax Ceramic Complex at K'axob and the Early Facet of the Bolay Complex at Colha and Kichpanha (Valdez 1987; Reese and Valdez 1987). In the Jenney Creek Ceramic Complex, the Mamom ceramic component relates to types present at Seibal and Altar de Sacrificios (see Gifford 1976). Joventud Red, Chunhinta Black, Pital Cream, Deprecio Incised, and Paso Dante Incised are Mamom types that Barton Ramie shares with Altar de Sacrificios and Seibal (see Gifford 1976; Sabloff 1975; Adams 1971), during the Jenney Creek Ceramic Complex. However, local ceramic traditions also flourished during the Jenney Creek Ceramic Complex, as potters were probably making local types like Sampoperro Red or Black Rock Red that are completely absent at Seibal and Altar de Sacrificios (see Gifford 1976; Sabloff 1975; Adams 1971).

The absence of Jocote Orange Brown pottery in the Peten-Pasion regions restricts its distribution to the Guatemala Highlands, El Salvador and Belize. Sharer (1978:125) believes that the Colos Complex represents the first indication of linkages to the Maya Lowlands. The Colos Ceramic Complex includes new pottery types and forms similar to those which figured in the first settlements in both Belize and the Peten-Pasion regions of Guatemala (Lowe 1978:362). I would like to suggest that the influences from El Salvador affected the Belize Valley at the end of Xe times. Jocote Brown, therefore, is not a Xe type, as it coexists with Mamom types at Barton Ramie and Colha (Valdez 1987). The arrival of new ceramic traditions from El Salvador may signal the beginning of Mamom times.

Jocote Orange Brown may be considered as one of the earliest traded ceramic types from El Salvador into the Belize Valley, accompanied by other lines of ceramic development that are keys to the Mamom horizon, such as Palma Daub and the refined and skillfully executed pottery called Savana Orange (see Gifford 1976). In El Salvador, Savana Orange developed into important Usulutan types and into monochrome and grooved pottery that is slipped orange (Sharer 1978). These ceramic traditions are recognized at Barton Ramie (Gifford 1976), Uaxactun (Smith and Gifford 1966), and Seibal (Sabloff 1975), during Mamom times. The beginning of Usulutan tradition is associated with the Kal Ceramic Complex at Chalchuapa (Sharer 1978). Usulutan tradition was soon to dominate the Southeastern Highlands for the remainder of the Preclassic Period (Lowe 1978). Usulutan tradition is found in the Salama Valley (see Sharer and Sedat 1987), at Laguna Zope in the Juchitan area (Lowe 1978:371), the Peten (Sabloff 1975), and northern Belize (Valdez 1987). Lowe believes that the "cloudy resist" ware is the type fossil for the Escalera Phase sphere in Central Chiapas (Lowe 1978:366).

Resist tradition was unrecognized in the lowlands until defined at Seibal (Sabloff 1975) as the Tierra Mojada Group. Tierra Mojada Resist is associated with one of the earliest blotchy Usulutan ceramics, the Puxtla Group from Chalchuapa (Sharer and Sedat 1987). According to Andrews V (1990:14), Tierra Mojada Resist represents a continued interaction among the southern Maya Lowlands, the Maya Highlands, and probably the Mixe-zoquean areas to the west and the south. The Tierra Mojada Group includes an incised type, Timax Incised, that corresponds closely, to common decorative modes in the southeastern highlands (Sharer and Sedat 1987:308). The presence of Tierra Mojada Resist, Timax Incised, and the few Unnamed Resist Orange sherds at the site of K'axob confirms the strong participation of ceramic traditions coming from El Salvador into northern Belize, as Tierra Mojada is also present at Colha (Valdez 1987). Consequently, I would like to suggest, first, that the presence of Xe ceramics in the Lowlands is more related to the Gulf and Pacific Coasts than it is to El Salvador; and second, that Jocote Orange Brown pottery is part of the ceramic influences coming from El Salvador which entered Belize via the Peten-Pasion regions at the end of early Middle Formative times.

B.- *Arrival of Xe ceramics in northern Belize.*

Xe ceramic tradition develops in the Peten and Rio de la Pasion regions, during the early Middle Preclassic. Quite possibly, the spread of Xe ceramics diffused from the Peten-Pasion regions through the riverine setting of Belize. The earliest ceramic complexes defined at K'axob, Colha and Kichpanha (Adams and Valdez 1979; Valdez and Reese, personal communication 1994) are a mixture of Xe and Mamom types. The presence of these ceramic types suggests a continuation of the "earliest" ceramic traditions of the Peten-Pasion regions into northern Belize. The mixture of Xe and Mamom types suggests that the earliest ceramic complexes in northern Belize developed at the end of the early Middle Preclassic. Ceramic evidence and radiocarbon dating from K'axob suggest a later beginning (770-550 B.C.) for the Chaakkax Complex than that of the Xe ceramic complex at Altar de Sacrificios (930-560), the Real ceramic complex at Seibal (810-570 B.C.), the Swasey complex from Cuello (1000/900 B.C.), and the Bolay complexes of Colha (910 B.C.) and Kichpanha (Adams 1971, Sabloff 1975; Andrews and Hammond 1990; Potter, Hester, Black, and Valdez 1984; Reese and Valdez 1987). The dating and the ceramics, therefore, cannot support the inclusion of the early ceramic complexes from northern Belize in the Xe ceramic sphere.

The presence of Achiotes Unslipped: Achiotes Variety at Becan (Ball 1977a), in the Mamom period, indicates the later dispersal of Xe ceramic tradition into the Yucatan. According to Ball, the first settlers of Becan appear to have pushed northward into the Rio Bec region from the Pete. They brought with them a complex or pottery closely related to the Mamom ceramics of the southern lowlands but gradually elaborated a slightly northern lowland tradition of their own (Ball 1977a:152). The technological and stylistic attributes of the Mamom horizon, occurring between Becan and Dzibilchaltun, suggest the existence of ceramic continuum, along the north/south axis of the Peninsula, for Late Middle Preclassic times (Ball 1977a:153). With this evidence, the presence of Xe ceramics is reassessed for northern Belize.

Evidence from Cuello, therefore, cannot support an earlier ceramic development before the arrival of Xe ceramics into northern Belize. The Swasey and Bladen Ceramic Complexes at Cuello (Kosakowsky 1987a), however, present a stronger Xe component when compared to the Bolay

Ceramic Complex at Colha (Valdez 1987) and Kichpanha (Reese and Valdez 1987), and the Chaakkax Early Facet at K'axob. In this regard, the site of Cuello continues to be one of the earliest sites in northern Belize.

III.- THE CHAAKKAX CERAMIC COMPLEX

A.- The cultural setting of the Middle Formative

The end of the Xe ceramic sphere is a period in which major occupation of the Maya Lowlands occurs (800-600 B.C.), including all extremes of the Yucatan Peninsula (Lowe 1978:365). Parallel to this event, sites on the Upper Grijalva River were abandoned at the close of the Escalera Phase as a response to dissolution of La Venta Olmec center (Lowe 1978:369). In contrast, some areas in southern Guatemala were not influenced by the decline of Olmec society. In southern Guatemala, some sites were more independent of Olmec traditions. The Conchas I Complex of southern Guatemala, for example, included a direct survival of the old Ocos ceramic tradition, as a result of a more independent development outside the Olmec tradition (Lowe 1978:361). The presence of tripod grater bowls and the evidence for interaction with South America suggest some socioeconomic independence from Olmec traditions for the Conchas society (Lowe 1978:361). On the southeastern periphery, pottery with some good Early Olmec characteristics in the Jaral Phase at Los Naranjos, Honduras appears to be outside the events that are shaping the Mamom period (Lowe 1978:362). Ceramic evidence suggests that, even though Olmec influence expanded as far as Honduras and El Salvador, there were sites in these regions that were more independent of Olmec economy.

Interestingly, the Las Charcas Ceramic Complex in the Guatemalan Highlands, has relatively little in common with Middle Preclassic complexes elsewhere, except in El Salvador during the Colos and Kal complexes (Lowe 1978:367). The Max Ceramic Complex (ca. 800-500) at the Salama Valley (Sharer and Sedat 1987) is associated with decoration of unslipped wares from Kaminaljuyu and Chalchuapa (See Sharer and Sedat 1987). The red on buff jar decoration, combined with cut appliqués, is especially close to Middle Preclassic traditions in both the southern highlands

(Kaminaljuyu) and to the east at Chalchuapa and the Pacific Coast (Sharer and Sedat 1987). The relevance of Kaminaljuyu and the site of Chalchuapa, therefore, can be identified in the ceramic assemblages of these regions.

At the end of the early Middle Formative, the rise of Kaminaljuyu as a regional capital probably cut off the spread of Olmec influence into Honduras and El Salvador. The weakness of Olmec control affirmed the emergence of Kaminaljuyu (800-500 B.C.) as an important regional center. Quite possibly, Kaminaljuyu gained control over the long established Guatemalan Pacific Coast-Motagua Valley-Los Naranjos route, but also, the route from the Guatemalan Pacific Coast to Chiapas, as indicated by fragments of Izapan style sculpture found at Chiapa de Corzo (Adams 1991:104). The emergence of Kaminaljuyu as an important regional center is accompanied by the rise of Chalchuapa in El Salvador.

Consequently, Peten-Pasion sites received ceramic influences from the Gulf and Pacific Coast (Andrews V 1990), and the Guatemala and El Salvador areas. Several routes could be used to distribute the ceramics from Guatemala and El Salvador to El Peten. One of these routes passed through the Salama Valley and followed overland through Alta Verapaz, linking highland sites such as Sulin, Sakajut, and Carcha 1 with sites such as Seibal (Sharer and Sedat 1987). Additionally, a secondary route used the Rio Chixoy drainage farther to the west (Sharer and Sedat 1987) to connect with the Peten-Pasion sites. Ceramics, however, are not the only evidence of contacts between the Peten-Pasion regions and the Guatemala Highlands. The San Martin Xilotepeque obsidian is distributed from Rio Pixcaya to Edzna and Seibal (McKillop and Lawrence 1989:65), and even to northern Belize. The first significant quantities of obsidian from the Guatemalan Highlands (San Martin Xilotepeque) appeared at Seibal during Escoba times (Sabloff 1975:231). Excavations at K'axob revealed obsidian fragments from San Martin Xilotepeque (McAnany, personal communication 1994). An obsidian blade from this source, moreover, appeared in Phase III-IV construction at Cuello (Hammond, Gerhardt, and Donaghey 1991:34, 40). Sites in Belize and the Peten-Pasion regions, therefore, conformed to cultural Mesoamerican background.

The Peten-Pasion regions, however, were more independent of the Guatemala Highlands, Honduras, and El Salvador ceramic traditions than were sites in Belize. This political division could explain the differences in the ceramic assemblages between sites in the Peten-Pasion regions and those in Belize that announced the Mamom horizon. Before the consolidation of Kaminaljuyu and Chalchuapa into influential centers, Peten-Pasion pottery affiliated more closely with Olmec ceramic traditions than with El Salvador. The influence from El Salvador and the Guatemala Highlands reached Peten-Pasion regions at a critical time in the Olmec realm, and indirectly helped to consolidate the power of Kaminaljuyu and Chalchuapa. The El Salvador ceramic component (Adams 1971; Willey 1977; Sharer 1978), however, is a later characteristic of most ceramic assemblages in the Peten-Pasion regions, explaining the absence of Jocote Orange Brown pottery in these areas.

IV.- THE K'ATABCHE'KAX CERAMIC COMPLEX

A- The Cultural Setting of the Late Formative

The Late Formative is a period of major interaction between the southern Maya area and the Maya lowlands. The replacement of Mamom regional diversity by the homogeneity of Chicanel ceramics reflects a more contiguous site system (Ball 1977b:122-123). K'axob ceramics exhibit particular patterns of cultural affiliations to the Peten-Pasion regions and the southeastern Highlands. Highland products such as jade, similar green stones, obsidian, ceramics, and other items are found in northern Belize, while Colha chert has appeared as far away as El Mirador and Uaxactun (Hammond 1992:141). The evidence favors an exchange system that linked sites in northern Belize with other southeastern polities.

During the Late Formative, there is a strong political stratification as a result of the emergence of Maya polities (see Sharer 1992:131). Izapa became the cultural and probable political center of the Soconusco (Voorhies 1989:103). The center of the San Jeronimo Basin, in the Salama Valley, emerged as the dominant force in the region; whereas the other sites in the valley continued limited functions with an overall regional organizational system (Sharer and Sedat 1987:431). Kaminaljuyu

consolidated its political growth by controlling the distribution of El Chayal obsidian (Demarest 1986:182) that even reached K'axob. The site of K'axob, therefore, is integrated with the economic development of the Maya Lowlands.

Ritual practices at K'axob are further evidence of contact with the rest of the Maya Lowlands, which supports that regions in the Middle and Late Preclassic were occupied by closely related populations (see Fowler 1982:615; Ball 1977b:122-123). Mortuary evidence from K'axob conforms to the rest of the Maya Lowlands and exhibits patterns that will be characteristic of Classic times, for example, the interment of a child with an adult (Freidel, Schele, and Parker 1993). Sacrifice and dismemberment of individuals were practiced since Middle Formative times, at the site of Los Mangales (Sharer and Sedat 1987:430). At K'axob, Late Formative burials also exhibit evidence of dismemberment. K'axob ceramic trends indicate contacts with El Peten-Pasion regions. Interregional ceramic comparisons, moreover, identified connections with the Guatemala Highlands and El Salvador. Similarities of the ceramics and the ritual patterns reinforce the idea that western El Salvador, the Valley of Guatemala, the Salama Valley and northern Belize were far more integrated that previously expected.

B.- K'axob Ceramic Integration with the southern Maya Lowlands

New evidence indicates that during the Formative period, western El Salvador was an innovative region and contributed key traits to the increasingly complex material culture of southeastern Mesoamerica (see Demarest 1986:149). Parallel to Formative ritual development in Belize, there was a significant evolution in the complexity and efficiency of the social and political system of the Chalchuapa area, due apparently, to trade in Usulutan pottery. The ceramic evidence from K'axob reflects contacts with ceramic traditions originating in these areas, as imitations and Usulutan pottery are present in the K'axob ceramic sample.

Usulutan ceramics are a definite example of the influence that El Salvador exerted over the culture of southeastern Mesoamerica. Joesinck-Mandeville (1987:3) suggests that Usulutan ceramics and the boulder sculpture at Copan link the Copan Archaic with other Late Formative complexes of the Mesoamerican southeastern highlands and southeastern periphery. Potbellied monuments were

found in association with the Jicalapa Usulutan, Pinos Black Brown, Olocuital, and Guaymango Red on Buff, characteristic ceramic groups of Kaminaljuyu and Santa Leticia in El Salvador (Demarest 1986:139; Demarest, Switsur, Berger 1982:565). These ceramic groups securely dated the monuments to the Late Preclassic (500-100 BC) and related them to an epi-Olmec phenomenon (Demarest, Switsur, Berger 1982; Demarest 1986).

Usulutan ceramics are part of the ceramic assemblage at K'axob, but no examples of boulder sculpture exist at K'axob. In Operation I, the spouted effigy jar is similar to boulder sculpture, from a purely stylistic perspective. The facial features, the prominent eyebrows, and the pronounced swelling on the sides of the face resemble the Pacific Coast sculptures (Headrick 1993). Boulder sculptures often have crude little hands curled around their swelling stomachs (Headrick 1993). The projections on the K'axob vessel do indeed appear to be the figure's arms hugging its belly (Headrick 1993). The K'axob spouted effigy jar is even similar in form, to an effigy globular bowl, in high relief, of the Comayagua Valley (Stone 1957: Figure 10:12). The "potbelly style" jar occurs in a ceramic complex that includes Usulutan ceramics. The duck effigy vessel found in Burial of Structure 27 reinforces the ceramic links between K'axob and the Guatemala Highlands. Potters of San Luis Jilotepeque still make vessels that resemble the Prehispanic duck effigy pot. The duck effigy vessel, *la pichinga*, is decorated with flowers, monkeys, deer, and fowl (Reina and Hill 1978:163). These ceramic relationships tie K'axob with the southeastern highlands.

C.- *K'axob Ceramics as part of the Widespread Ritual Ceremonialism of the Maya Lowlands*

Lip-to-lip caches are considered to be the most ancient expressions of Maya ceremonialism (Freidel, Schele, and Parker 1993:241). The Late Formative at K'axob is characterized also by the appearance of lip-to-lip caches. At Cuello and K'axob (Hammond and Gerhardt 1991:225), pottery vessels included in cache offerings belong to the Sierra Group. At the site of Cuello, a lip-to-lip cache contained a concentration of deer mandibles and a "dagger" (Hammond and Gerhardt 1991:226). At K'axob, a Sierra Red dish (Burial 1-Structure 102) contained a skull, a macroblade, *Pomacea* snails, and freshwater shells. The dish form is very similar to those vessels used as part of a sacrifice or a blood-letting ritual, during the Classic period (Freidel, Schele, and Parker 1993:205). The dish, commonly

called a "lak", held the severed heads of victims and a small obsidian blade fragment used for decapitation (Freidel, Schele, and Parker 1993:202, 241).

These ritual offerings, however, are not the only practices supporting the integration of K'axob within Maya ideology. The quadripartite offering and its contents, for example, are not exclusive to K'axob. The two Society Hall vessels, placed within the north-south axis, contained deer teeth. The north vessel comprised intact rows of deer teeth, while the south vessel contained only deer teeth. In this offering, the east and west vessel are two Sierra Red: Gadrooned Variety bowls. The east vessel included in its contents frog bones, a deer incisor, a possible fish maxilla, rodent teeth, and 108 pieces of microdebitage. The west vessel contained rows of deer teeth, along with frog bones, and 8 pieces of microdebitage (Jackson 1992).

The elements associated with the quadripartite offering may connect to a ritual that symbolizes the beginning of a new year, of a new period, perhaps of a new agricultural cycle (Pohl 1983). Deer, for example, were supernatural figures in ancient Maya religion and appear to be associated with the sun and with the *cuch* rite, the festivity for a year renewal (Pohl 1983:62). Fish were also involved in the *cuch* rite that took place in the month of Zip (Pohl 1983:74). Toads or frogs are considered to be sacred because they consort with the Chaacs (Pohl 1983:65). During the Inquisition of 1562, Yucatec Maya confessed to sacrificing deer, dogs, and peccaries at the feet of crosses (the equivalent of sacred trees) in churches and cemeteries (Pohl 1983:63). Sacrificing deer seems to be a practice that started in Middle Formative contexts, as Awe (1994) reported finding a concentration of deer limbs at Cahal Pech for these early times. More interestingly, potters in San Martin Jilotepeque still decorate decorate their vessels with these animals.

At K'axob, the cross is not only represented spatially, but a four-quadrant cross motif appeared constantly on several Sierra Group ceramic vessels. The image of the cross may be related to the Maya conception of the world or to agricultural practices (see Schele and Freidel 1990). Until 1930, placing a quadripartite offering for agricultural practices was a common practice in the Toledo District (Thompson 1930). Each family cultivated its own *milpa* by setting up a small altar, with a cross behind it, on the edge of the area intended to be cleared (Thompson 1930). The ceremony, referred to as the

primicia or *u walikol* was attended only by the owner of the milpa. On the morning, the owner would bring five calabashes or *Luts* containing a special *posol* known as *sakqab* (see Thompson 1930). The calabashes were placed one at each corner of the altar, and one in the center of the front edge, as guardians of the *milpa* (see Thompson 1930:116). Its presence in Formative shrine burials is indirect evidence of canal and raised field construction during the Late Formative and suggests a close linkage between the burial of important group members and the strategic resources of the nearby swamp (McAnany 1993).

D.- *The end of the Formative: Further Evidence of Contacts with the southern Maya Lowlands*

At the close of the Late Formative, new decorative and form modes appear in the Maya area, giving way to the so-called Protoclassic period (Adams 1971:4). The new modes include tetrapods, mammiform supports, Usulutan designs, orange and polychrome pottery and the diagnostic Aguacate Orange. The Protoclassic is one of the most discussed ceramic periods in Maya archaeology. The regional diversity of Protoclassic ceramics in the Maya area creates problems for interpretation. At K'axob, the new ceramic modes coexist with Late Formative types such as Sierra Red, Society Hall, Hillbank Red, and Monkey Falls. In addition, there is a notable presence of bichrome and polychrome pottery such as Guacamallo Red-on-Orange, Ixcanrio Red-on-Orange, and Usulutan ceramics. In this regard, the new ceramic modes are part of the Terminal Facet of the K'atabche'kax Ceramic Complex.

An early interpretation of the Protoclassic considered this period as the result of a population intrusion from El Salvador (Gifford 1976:127; Willey and Gifford 1961; Sharer and Gifford 1970). According to Gifford (1976:127-128), the intrusive population was responsible for the appearance of polychrome pottery, Aguacate Orange, and the stylistic attributes of the Holmul I style. Pring (1977b) explains that Protoclassic ceramics cannot be considered as intrusive because most of the suggested characteristics have a long history in the Maya Lowlands. The resist ceramic tradition, for example, occurs at K'axob since Middle Formative times. Aguacate Orange may have a local precursor in San Antonio Golden-brown: Unspecified Variety, while Escobal Red-on-buff might easily be regarded as an antecedent to Guacamallo Red-on-orange (Pring 1977b:151). Based on the

Late Facet ceramics of the K'atabche'kax Ceramic Complex, I agree with Pring (1977b) that Protoclassic modes were already present during Late Formative times. At K'axob, Aguacate Orange appeared in various contexts during the Late Facet of the K'atabche'kax Ceramic Complex. Aguacate Orange, however, has a significant distribution for the Terminal Facet of the K'atabche'kax Ceramic Complex.

The problematic origins and chronology of Aguacate Orange led Forsyth (1989) to suggest that relationships between Aguacate Orange and the orange-slipped dichromes and polychromes need to be reexamined. Forsyth (1989:52) observed that the characteristics of Aguacate Orange were very different from those found on Gavilan Black-on-Orange and Ixcanrio Orange-polychrome. Aguacate Orange bore a dull red-dish slip, while the decorated types presented a slip more as the one found on Aguila Orange. At Naj Tunich, Brady (1987) concluded that Aguacate Orange was closer to Homul Orange Ware and that polychrome pottery should be part of Peten Gloss Ware. Forsyth (1989:52) indicates that Brady's suggestions raise a number of problems. Nevertheless, Brady's observations lead to a revision of the taxonomic structure of Aguacate Orange. The K'axob situation is also complex in that the forms of Aguacate Orange are closer to Late Formative vessels of the Sierra Group. The Aguacate Orange slip at K'axob is also a dull red. For the Terminal Facet, Sierra Red slip is still waxy, but the color becomes indistinguishable from Aguacate Orange. Certainly, Aguacate Orange at K'axob is far from the Holmul Orange ware. These characteristics more likely support Demarest's (1986:153; 1987:331) observations that Aguacate Orange: Atecozol Variety of western El Salvador did not have any relation to the important Aguacate Orange ceramics of Protoclassic and Early Classic ceramics from Belize.

The attributes of Aguacate Orange: Atecozol Variety describe the type as being slipped with a streaky thin slip or wash that fires a distinctive dull orange red (Sharer 1978:42). Brady suggests that there is a nearly complete overlap in slip color, thickness and sheen between Aguacate Orange and Society Hall within the Naj Tunich assemblage (Brady 1987:475). The continuity between the Society Hall Red and Aguacate Orange suggests that the origins of Aguacate Orange lie in the Late Preclassic wares (Brady 1987:475). I have not examined Aguacate Orange: Atecozol Variety. The characteristics, however, show a close relationship to Society Hall: Society Hall Variety. Although there are a number of problems still

to be solved, I agree with Forsyth (1989:52) that, Protoclassic ceramics need to be seriously addressed and that sherd to sherd examinations are essential to increase our understanding of this period.

E.- *Recent Approaches to Protoclassic Ceramics in the Maya Lowlands*

New evidence and studies (see Pring 1977b; Adams and Hammond 1982; Demarest and Sharer 1982; Hammond 1984; Demarest 1986), however, deny earlier hypotheses of migration or intrusion (Gifford 1976:127; Willey and Gifford 1961; Sharer and Gifford 1970). All of this suggests that an exchange of modes occurred, gradually, over four to five centuries indicating a continuous growth of highland-lowland interaction and trade rather than focused events or intrusions (Demarest 1986:332). Interaction between the highlands and the southern lowlands, moreover, cannot be considered as an exclusive characteristic of this period. Ceramics in northern Belize suggest that sites in this area were involved within interaction systems that brought them into contact with the southeastern lowlands since Middle Formative times. Northern Belize participated in a possible trade network that provided obsidian from San Martin Xilotepeque and even Usulutan ceramics. During the Late Formative, the presence of Usulutan ceramics and El Chayal obsidian is evidence of a continuous interaction with the southeastern lowlands, in part, due to trade. Kaminaljuyu and Chalchuapa had evolved into powerful centers as a result of their control and distribution of resources. Kaminaljuyu controlled the distribution of obsidian from El Chayal (Demarest 1986:182), while Chalchuapa increased trade in Usulutan pottery (Schortman and Urban 1991:138). Consequently, Protoclassic modes in northern Belize may be the result of a corresponding increase in the complexity and efficiency of a trade system.

Most of the time, however, interaction is explained as an unilinear process not as a reciprocal activity. Archaeologists working in Central Peten or northern Belize (see Adams 1971, Sabloff 1975, Gifford 1976) looked to the Guatemala Highlands and El Salvador for ceramic influences on Belize. Demarest's (1986) positive criticism of this approach led him to state that models tend toward a linear or a core-area position, without giving explanatory answers. I would like to add that in dealing with small scale sites that there is a tendency to approach a relative "influence" from the major core into the smaller one, without analyzing if the smaller core had an impact on the major center. Bichrome and

polychrome types may be an example of ceramic modes traveling from Belize to the Peten-Pasion regions and the southern Lowlands.

Belize had a long tradition of making bichrome pottery (see Gifford 1976), in comparison with Western El Salvador or the Highlands, where Gavilan Red on Orange and Ixcanrio Orange Polychrome have no antecedents. Internal similarities in both the Holmul and the Nohmul material and differences between the ceramics of the two sites support the notion of parallel local developments (Hammond 1984:3). At K'axob, the new influences show much continuity with earlier Formative styles and a relationship to pottery of the Holmul I and Floral Park phases. The diversity of bichrome and polychrome pottery of the Protoclassic period suggests the existence of various production centers for the making of these vessels (Graham 1994:208). The possibility of having several production centers could explain the diversity of polychrome pottery in the Maya Lowlands, as the access to these vessels could be restricted to trade or alliances. Graham (1994:208) suggests that the available resources in the Stann Creek District and the emergence of trade in slips and paints through a widespread exchange and communications networks argue for the development and spread of bichrome and polychrome pottery (Graham 1994:327).

Apparently, Ixcanrio Orange-Polychrome or Guacamallo red-on-orange pottery show the blending of more than one polychrome style (Graham 1994:327). Gifford considered the appearance of Ixcanrio Orange Polychrome as the basis for the Classic traditions (Gifford 1976:127). Earlier polychrome traditions, therefore, seem to crystallize in the making of Ixcanrio Polychrome or Guacamallo red-on-orange pottery. Consequently, the distribution of polychromes like Ixcanrio or Guacamallo may reflect the interaction among communities in the Maya area. Sherds typical of the Floral Park ceramic complex of Belize, including an Ixcanrio Orange Polychrome dish with distinctive paste similar to examples at Barton Ramie, were identified in strata underlying a typical Ulua Valley component with early polychromes at a site on the Chamelecon River (Joyce 1993:85). These vessels probably arrived in Honduras through the Ulua River. In La Lagunita, the connection with the Lowlands is established by the presence of Ixcanrio ad Guacamallo Orange polychromes that are considered as imported vessels (Ichon 1987:290). At Tikal, the vessel forms are associated with Holmul I, but are not accompanied by the Ixcanrio

polychrome that was typical of the eastern region (Culbert 1963:37). The lowland Maya polychrome tradition, therefore, is not an essential characteristic of the Protoclassic period. Earlier experimentation does not bear on the arguments for or against an intrusion of people or ideas into the eastern lowlands from the southeast Maya highlands in the Protoclassic (Graham 1994:328). Maya polychrome tradition is a reflection of the social and political situation in the lowlands (Pring 1977b:153) or becomes a symbol of power consolidation by the end of the Protoclassic (Graham 1994:328).

F.- *The Cultural Panorama at the end of the Formative*

Near the end of the Late Preclassic, cultural development at Chalchuapa is interrupted by the volcanic eruption of the Ilopango (Sharer 1978:210). The eruption or series of eruptions blanketed all of Chalchuapa and its sustaining valley with a thick layer of volcanic ash, producing a large scale agricultural collapse and demographic shifts (Sharer 1978). A disaster of this magnitude decreased the availability of natural resources such as shellfish, fish, and related aquatic species (Sheets 1987). The natural disaster in El Salvador, moreover, attracted the idea of a population intrusion into the Maya Lowlands.

The collapse of Chalchuapa signaled the end of the southeast periphery interaction system, which affected local relations of production and distribution (Schortman and Urban 1991:137). Chalchuapa's collapse led to the abandonment of Late Preclassic monumental sites of the southeast and the complex ritual and social systems associated with them (Schortman and Urban 1991). The collapse of production and distribution systems disrupted established routes connecting the Pacific Coast to El Salvador area. Trade sources seem to have shifted during the Horcones phase (Lowe 1962). The Salama Valley witnessed a rather sharp decline in both the number and size of sites in the area (Sharer and Sedat 1987:434). El Porton lost a significant portion of its sustaining base and regional pre-eminence in the Terminal Preclassic (Sharer and Sedat 1987:434).

Sites in these regions found it difficult to sustain control of their regional power, while this represented an advantage for sites such as Copan that were not entirely dependent on imports from regional centers (Schortman and Urban 1991). Population in the Copan Valley was undergoing a drastic process of population nucleation (Schortman and Urban 1991:137). Kaminaljuyu witnessed a cultural florescence. Ceramic quantities indicate a significant increase in production. Many new types are introduced and certain varieties acquire a standardization suggesting occupational specialization and mass production (Wetherington 1978:129).

Sites in the Belize region and the Yucatan area experienced different responses to the Ilopango eruption and the disruption of the trade routes that were bringing in a wide variety of products from the southern Lowlands. While sites in El Salvador and the Salama Valley were in an apparent decline, northern Belize increased construction activity at sites such as Kichpanha (Reese and Valdez 1987:41) and K'axob. At Kichpanha, for example, the inhabitants expanded the main ceremonial complex (Reese and Valdez 1987:41). Interestingly, ritual activity related to termination rituals continued during this period at K'axob. Most caches, however, are associated with calendric ritual plays on agricultural metaphors of cyclic death and rebirth that had profound meaning for Maya supporting populations at agricultural places like K'axob (Masson 1993).

The image of the cross continued to be represented in the Maya area. At K'axob, Society Hall: Society Hall vessels, for example, present a stroke-painted cross on the base. The image of the cross is represented in Mound 5 at Chiapa de Corzo, possibly, in its cruciform plan (Lowe 1962). Most rooms of Mound 5-H1 comprised caches that yielded 700 complete or partially restorable vessels and other objects (Lowe 1962:10). The offerings and the extended, flexed sitting, or right-side burials for Mound 5 suggest a termination/initiation ritual (Lowe 1962:21-22). Construction of Mound 5 may represent the end of an event, as the mound was definitely abandoned and burned down at the end of the Horcones phase occupation (Lowe 1962). The destruction of the edifice occurred almost immediately after the placement of the offerings, because quantities of the heavy clay and plaster roof had fallen directly upon the cache vessels or on the floor surface in many instances; perhaps destruction was an act of renewal (Lowe 1962:10). Similar structures are reported at Tikal. Coggins (1990:89) noted that no stelae were erected to commemorate the end of the Baktun Nine at Tikal. Instead, on the

culminating Venus Day of 7 Ahau (the same as the Venus dedicatory day of Tikal Stelae 31), a stairway radial structure was constructed in the shape of the cyclic completion sign (Coggins 1990:89).

Terminal K'atabche'kax ritual offerings and ceramics are similar to the Horcones phase of Chiapa de Corzo (see Peterson 1963:123). The inhabitants of Chiapa de Corzo placed rounded pebble stones in their burials and caches (Lowe and Agrinier 1960:97, Plates 31f, 37e). Burial 21 at Chiapa de Corzo, for example, contained 73 small volcanic tuff pebbles (Lowe and Agrinier 1960:53). The contents of Horcones vessels are very similar to the offerings at K'axob. The individual in Burial 3-Structure 93 was interred with three rocks over the shoulders. A cache placed in Structure 18 consisted of six burnt limestone balls and three Sierra Red vessels. The Maya associate these stones with lightning (Freidel, Schele, and Parker 1993:227). Freidel, Schele, and Parker (1993:55) describe placement of magical stones and little gourd cups of *balche* by a shaman to receive the blessed power of the gods in front of an altar (sky tree). Three stones relate to the Creation (Freidel, Schele, and Parker 1993).

Images, such as a monkey, are associated with renewal ceremonies (Pohl 1983:66). The monkey image seems to be widespread in northern Belize. A vessel found at Kichpanha is shaped to form a monkey (Meskill 1992:118). At K'axob, a Society Hall: Society Hall Variety has two monkey face applications on each side. Another vessel found in the same Burial has a painted cross on the bottom. At the crossing point, the potter painted a circle, outlined by four dots, forming a quadrangle. This symbol represents Kin sign, the fundamental unit for the measurement of time (Smith 1955:74). The representation of the Kin sign on the pottery is probably one of the earliest in the Maya Lowlands, as Smith reports the presence of this symbol for the Late Classic in Guatemala, Honduras and Belize Valley.

Certain regions in the Maya area at the end of the Formative period, the widespread cultural uniformity apparently broke down within a relatively short time. The highland Maya went into an apparent decline, as highland and Pacific coast settlement patterns dramatically shifted and previously occupied areas were abandoned (Sharer 1978:210), creating demographic and economic changes (Bove 1989). Sites in northern Belize were not strongly affected by these

changes. Widely distributed Late and Terminal Formative ceramics were replaced by the end of the Early Classic (Bove 1989:9). The causes for this decline are still very elusive. Two factors seem to be involved in such disruption: the eruption of The Ilopango and the regional expansion of Teotihuacan.

V.- THE NOHALKAX CERAMIC COMPLEX

A.- *Cultural Transformation in the Realm of the Classic Period*

At the close of the Formative period, the decline of Chalchuapa and the weakness of production and distribution systems interrupt the growth of Formative centers like Kaminaljuyu. The political and economic weakness of El Salvador and the Pacific coasts possibly facilitated disruption as did the regional expansion of Teotihuacan. It is uncertain when and where Teotihuacan emissaries settled first in the southern Maya area. The first incursion of Teotihuacanos focused in the Peten and in the Pacific slopes south of Kaminaljuyu (Berlo 1989:163). Lack of Teotihuacan influences, however, is notable at Seibal (Sabloff 1975), Altar de Sacrificios (Adams 1971), and sites in northern Belize. In contrast, Altun Ha exhibits Teotihuacan ceramics and ritual patterns (see Pendergast 1971). The date for Teotihuacan presence in the Peten is approximately A.D. 380 (Berlo 1989:164). In northern Belize, Pring proposes (1977:147-14) an A.D. 400 date for the Teotihuacan cache found at Altun Ha (Pendergast 1971). Pendergast (1971:456), however, dates the burial and the cache to the beginning of the Protoclassic period, between A.D. 100-200. A basal flange polychrome dish found at Watson's Island dated to A.D. 100-250 (Graham 1994:217). Vessels in the Horcones Phase, the Protoclassic period at Chiapa de Corzo (see Lowe 1962), exhibit vessel forms related to Teotihuacan modes. In this regard, Pendergast's and Graham's dates confirm the data for Chiapas and the Pacific slopes. Recent research, therefore, develops a new perspective on the Formative/Classic juncture and the growth of Classic Mesoamerican civilizations.

K'axob exhibits evidence of an unusually vigorous Formative to Early classic transition marked by continued residential construction, burial interments and pyramidal-building (McAnany 1994). At Pulltrouser Swamp, the Tibaat and Kokeal settlements suggest Late Formative and Classic period

occupations (Harrison 1983, 1989). Located four kilometers to the southeast of K'axob, the site of San Estevan appears to show greatest expansion during the Early Classic (Levi 1993). Evidence of earlier Formative construction at San Estevan was restricted to a sequence of stratified plaza floors, although Hammond (1973) confirmed the presence of Mamom ceramics. The Early Classic period represents a moderate occupation for some sites in northern Belize. Sites like Colha (Valdez 1987) and Nohmul have an underrepresented Early Classic component (Valdez 1987), while Altun Ha, in contrast, sees significant activity during both the Early and Late Classic periods (Pendergast 1979, 1982a, 1982b). Places such as Caledonia and Aventura suggest a strong Early Classic occupation (Ball 1983; Sidrys 1983) a prevalent pattern that also exists at eastern Peten sites, particularly Holmul (Merwin and Vaillant 1932).

The transition from Formative to Classic periods in Mesoamerica is poorly understood, as the transition is anything but uniform throughout the Maya area. At Colha (Valdez 1987:246) and Altar de Sacrificios (Adams 1971), the ceramics of the Early Classic derived from traditions of the Terminal Formative. Understanding the nature of these changes from the Formative to Classic periods is of major concern for this study. K'axob is a very interesting site to study cultural transformation, because Nohalkax ceramics show continuities with Late and Terminal Formative traditions. Ceramic development during this period is somehow weak at K'axob and various other sites in northern Belize in comparison with earlier times. Sites from or near the Pasion and the Usumacinta system to the Gulf Coast lowlands had also a weak ceramic expression during the Early Classic Period (Sabloff 1975:234). The strong economic and political "influence" that Teotihuacan exerted over the Peten may have affected the economic development of the Peten-Pasion regions (Sabloff 1975), the Usumacinta (López Varela 1994), and northern Belize. Even in this background, Teotihuacan could not hinder the consolidation of the Maya area. Many sites in the Peten-Pasion regions, the Usumacinta, and northern Belize, developed into strong political centers, after the "withdrawal" of Teotihuacan at the end of the Early Classic Period.

VI- FINAL CONSIDERATIONS

The main concern of the K'axob ceramic analysis is to provide information on the life of a small Formative village in northern Belize. The K'axob ceramic analysis, hopefully, has traced a new path for inter-site comparisons, leading to knowledge about the populace of K'axob articulated with other sites in the Maya area. With this study, I hope to have strengthened the idea that ceramics must be studied by intensive comparative evaluations with outside areas. The observations and questions I have raised surrounding the Cuello classification procedure are intended to strengthen the established comparative framework for northern Belize. However, more research is needed to integrate the ceramics more fully with the rest of the Maya Lowlands. Continuous archaeological work cannot but expand our knowledge of Maya society.

As a result of this work, moreover, I also hope to have encouraged the study of small-scale sites such as K'axob. Archaeological research still concentrates on the major Mesoamerican centers such as Teotihuacan, Monte Alban, Palenque, Copan, or Chichen-Itza. Recently, Mesoamerican archaeologists have started to focus their attention on sites located at the peripheries of Mesoamerican civilizations, such as the southeastern Maya periphery (Urban and Schortman 1986) or the Maya northern Usumacinta region (Rands 1973; López Varela 1994). Only a comprehensive study of both large and small-scale sites will lead to an understanding of the forces shaping Classic Maya Society.

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